a W. R. C. Smith publication

FIFTY CENTS

Textile Industries

Formerly "COTTON"

AUGUST, 1957

Let Spinners Spin!
page 79

How to Cut Weaving Seconds
page 86

New—Vacuum Slub Catchers
page 88

Why Do Textile Mills Fail?
page 91

Heavy Lap Ends Must Go!
page 94

New Vat Printing Technique
page 103

Back-Up Your Lube Program!
page 106

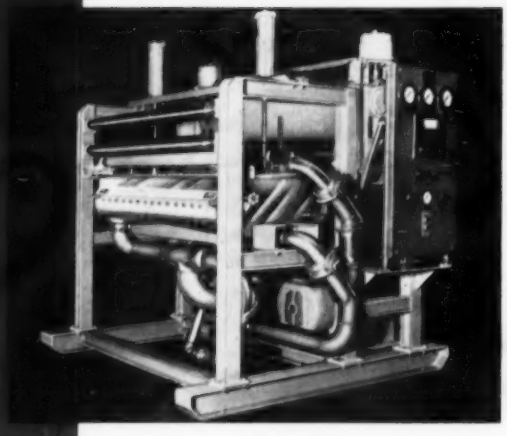
Bulletin Board Posters
pages 111-114

Take Care of Slasher Rolls
page 115

Knitting Section
pages 149-161

Complete List of Contents
pages 3 and 4

Designed for Better Dyeing . . .



THE TEXTILE SHOPS' NEW BOND DYEING MACHINE

This revolutionary Bond Machine provides better, faster, more flexible continuous dyeing with great savings in materials and floor space. It permits the continuous dyeing of various fabrics now handled only by batch methods such as jig or kettle dyeing.

Virtually all dyestuffs, including soluble vat, direct, acid, sulphur, acetate and naphthol are readily applied with the Bond Machine. It is particularly suited for handling such hard to wash-and-dry fabrics as poplins, upholstery, tufted, corduroy, terry, knitted, etc. The machine is ideal for washing heavy or pile fabrics. It requires small quantities of dyes; thus, short runs can be handled economically and color change-overs quickly accomplished.

The Textile Shops

SPARTANBURG, SOUTH CAROLINA

University Microfilms
313 No First St
Ann Arbor Mich 4

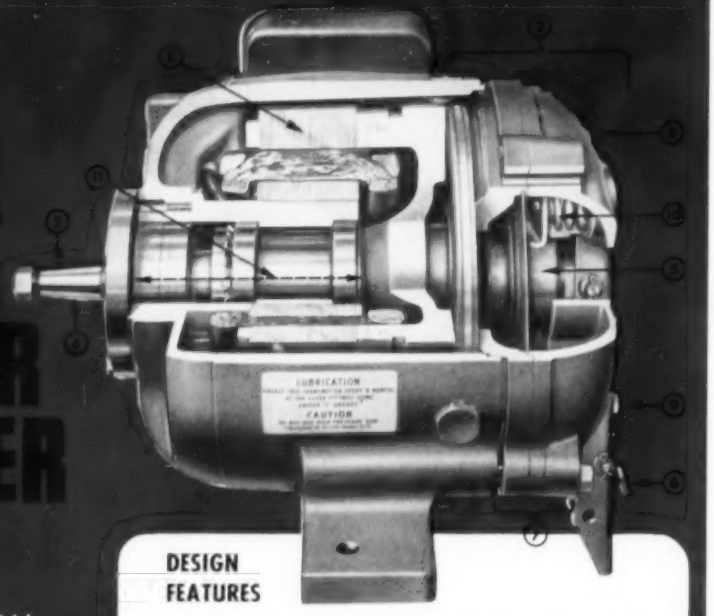
Next Month: SPECIAL SYNTHETICS ISSUE

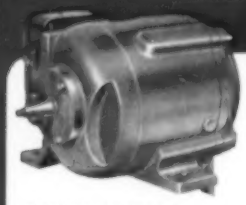
THE DEPENDABLE DIEHL

"BA" POWER TRANSMITTER

For Draper Looms

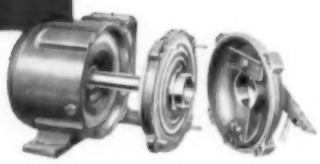
Exclusive new design features mean . . . *consistent* quality production . . . *peak* operating efficiency . . . minimum maintenance, labor and costs!



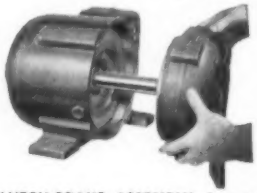


STREAMLINED FRAME
Easy to clean. Roomy terminal box.

KINETIC BRAKING ACTION
(See Feature 6)



CLUTCH-ACTUATING BEARING—A strikingly new and improved method of mounting. (See Feature 5)



CLUTCH-BRAKE ASSEMBLY—Improved, simplified. Readily removable as a unit. (See Feature 2)

DESIGN FEATURES

*1. High inertia inverted motor provides "stored energy" for smooth, fast starts and positive picking (maximum inertia with minimum size) . . . prevents regeneration.

The original and only loom power transmitter . . . plus many outstanding design and construction features never before incorporated in a loom drive!

Over 40,000 Diehl Power Transmitters have been in continuous operation on DRAPER LOOMS—*most of them more than six years!* The "BA" Power Transmitter is even *more* compact, *more* streamlined, *more* efficient and *more* easily installed and serviced than its famous predecessor.

It's an inverted-type high inertia motor combined with a fast, positive clutch-brake mechanism. Note the exclusive design features—the clutch-actuating bearing mounting . . . the kinetic braking action . . . the unitized clutch-brake assembly. These important advancements mean increased production . . . improved cloth quality . . . lowered operating costs . . . fewer shutdowns. *Write, wire or phone today for full information.*

plus these outstanding Features

*2. **CLUTCH-BRAKE ASSEMBLY**—Improved and simplified for positive action and ease of adjustment. Removes readily as unit for maintenance, without disconnecting motor from loom frame.

3. **PINION**—Free accessibility for installation and maintenance.

4. **SHAFT**—Large diameter, alloy steel, heat treated—assures long life, eliminates need for outboard bearing.

*5. **CLUTCH-ACTUATING BEARING**—New diaphragm mounting for frictionless clutch action, positive radial rigidity of bearing . . . eliminates fretting corrosion . . . means full self-alignment of bearing for maximum life.

*6. **KINETIC BRAKING ACTION**—For rapid, accurate stops. Particularly desirable for center fork detection looms.

7. **CLUTCH AND BRAKE ADJUSTMENT**—Simple and convenient. Provides visible check on brake alignment.

*8. **CLUTCH-SETTING INDICATOR**—Built integral with unit for instantaneous external checking of clutch setting.

9. **SAFETY LATCH**—Built integral with unit. Prevents accidental engagement of clutch.

10. **CLUTCH-LOADING ASSEMBLY**—Internally located, hence tamper-proof.

11. **SHAFT-END BEARINGS**—Arrangement simplified and improved. Two ball bearings and an extra large roller bearing assure maximum life.

** Exclusive feature—patent protected.*

Diehl

DIEHL MANUFACTURING COMPANY

Electrical Division of THE SINGER MANUFACTURING COMPANY

Finderne Plant, SOMERVILLE, NEW JERSEY

BALTIMORE · CHAMBLEE, GA. · CHARLOTTE, N. C. · CHICAGO · CINCINNATI · DETROIT · MILWAUKEE · NEEDHAM, MASS · NEW YORK · PHILADELPHIA

SPINDLES

DRAPER

DRAPER

all-steel top drive anti-friction spindles permit better spinning at lower cost

Concave collar and washer design makes "plumbing" easier and faster. Spindle slippage is reduced to a minimum.

Welded construction eliminates possibility of doffer guards becoming loose.

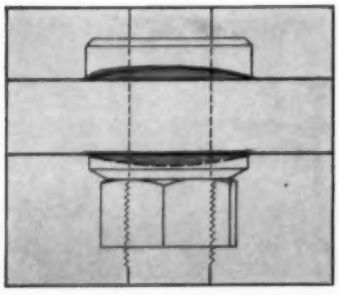
Incorporated whorl design permits easier removal of waste yarns when doffing and simplifies manual braking. Bolster life, spindle speeds and quality of yarn are all increased.

Power requirements, lubrication cycle, blade vibration and ends down are all reduced.

In addition . . . it's an accepted fact that Draper conforming fit maintains a more even bobbin line than any other Top Drive.

Let a Draper spindle specialist analyze your spindle needs today.

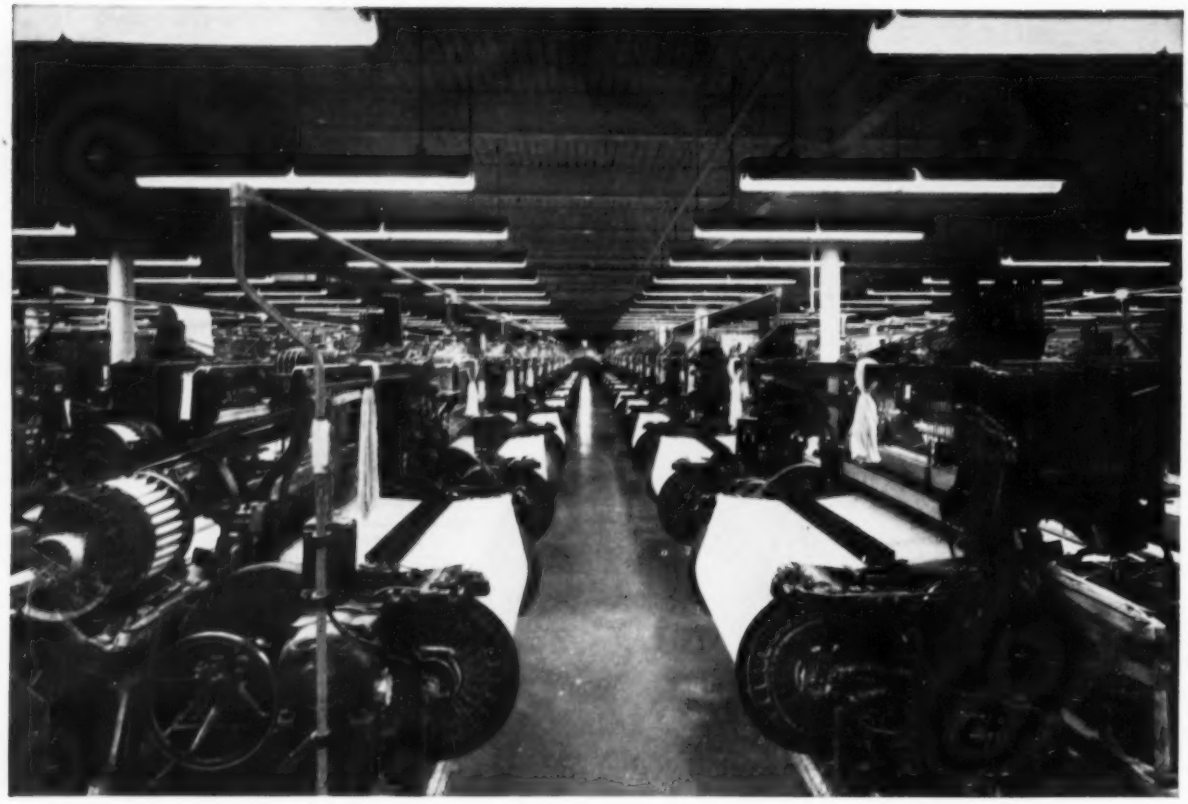
Concave collar and washer design makes "plumbing" easier and faster.



DRAPER CORPORATION

Hopedale, Mass.

Atlanta, Ga. Greensboro, N.C. Spartanburg, S.C.



Cloth stays clean
. . . production per application goes up with Texaco Stazon

Lubricate looms with *Texaco Stazon* and you'll find you get more production before you have to lubricate again. *Texaco Stazon stays on* the lubricated parts. It never splatters, creeps, or drips. That means clean cloth.

Effective lubrication is assured by a special stabilizer in *Texaco Stazon*. You get longer bearing life because *Texaco Stazon* minimizes wear. It assures normal operating temperatures, and maintains low machine power consumption.

You can run heavy packages at full speed and be certain your yarn will keep clean, if you lubricate your spindles with *Texaco Spindura Oil*. That's because of its high oxidation resistance. It does not thicken, form gum, atomize, or fog.

To condition fibre, use *Texaco Texspray Compound*. It assures fewer ends down, more uniform count.

Ask a Texaco Lubrication Engineer to help you get better performance from all your equipment. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, New York.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 121, No. 8
August, 1957

CONTENTS

Articles digested for quick reading on page 4

Management

Textile Failures—Causes and Preventives 91
Market Research Conference Report 101
Lubrication—a Management Responsibility 106
Posters for Mill Bulletin Boards 111-114
2-Year Textile Course in Georgia 123
Don't Turn Down Promotion for Fear of Heart Attack 161

Cotton

Let Spinners Spin! 79
Vacuum Slub Catchers Up Winder Output 15% 88
Ways to Prevent Heavy Picker Lap Ends 94
Warp Sizing, Article 16 115
Method for Setting Spinning Doffer Loads 137
Set Spinning Rolls While Frame Runs 143
Warper Lease Board Prevents Tangles 145

Wool

More Wool Research Urged 84
Smooth Start for Wool Cards 85
A "Unique" Wilton Carpet Is Born 127

General and Technical

Give Your Boilers the Once-Over 90
Survey of Auto Upholstery Trends 97
How to Trace Defect Patterns in Cloth 98
Importance of a Good Lubrication Program 106
TI Poster No. 3 (Pry Travelers Off) 111
TI Poster No. 4 (Battery Filling Tip) 113
Take Care of That Lathe! 122
Tax and Tax—Waste and Waste 124
1957 Textile School Graduates 131
Warmer and Lighter Cold Weather Fabric 135
Tip for Weaving Metallic Yarns 139
Inexpensive Truck for Battery Fillers 139
You Can Build a Flexible Lamp 141
Knock-Off for Tensile Tester Motors 141
How to Keep Heavy Yarn in Shuttle Eye 145

Synthetics

81 Here's an Improved Nylon Carpet Yarn Splice
86 How to Cut Seconds in Silk Weaving
87 Test for Carpet Fuzz and Pill Tendency
105 Permanent Antistatic Properties for Arnel
115 Warp Sizing, Article 16

Wet Processing

82 Finishing Plant Supervisors Control Quality
93 How One Mill Cut Valve Maintenance Cost
103 Vat Printing at Eureka

Knitting

143 One Way to Prevent Press-Offs
151 Planned F-F Lubrication Pays
152 Automatic Sweater Setting
153 Tip on Yarn Tension for Body Knitting
153 Troubled with Dropped Stitches?
153 Statistics on F-F Outerwear Industry
157 Multi-Spline Clutch for Komets
159 South Has 43% of Tricot Machines
159 How One Mill Increased Guide Bar Pin Life
160 Wrapping Hose for Supermarket Shoppers
160 1956 Hosiery Shipments Off 4.5%

Departments

6 Shorts and Remnants
26 Personal Notes About Men You Know
63 News in Brief
73 An Executive Views the News in Textiles
75 Future Events
137 How Other Men Manage
167 New Equipment Parade
185 Helpful Booklets Free
204 What the Textile Mills Are Doing
206 Suppliers' News

EDITORIAL AND EXECUTIVE OFFICES: 806 Peachtree St., N. E., Atlanta 8, Georgia

J. Frank Guest, *Managing Editor*
George H. Dockray, *Executive Editor*

Milton C. May, *Associate Editor*, P. O. Box 11015, Charlotte 9, N. C.
Stanley M. Sucheckl, *Associate Editor*, P. O. Box 131, New Canaan, Conn.

Jesse W. Ellington, *Associate Editor*
Melba L. Rowan, *Assistant Editor*

J. A. Moody, *Production Manager*

John C. Cook.....*Vice-Pres. & Bus. Mgr.*
Walter M. Mitchell, Jr.....*Advertising Manager*

Business Representatives in U. S. A.

BOSTON—Arthur C. Shaw, *27 Southgate Rd., Wellesley 81, Mass. (Phone: Wellesley 5-3648).*
NEW YORK—William K. Hoffman, *58 Euclid Ave., Maplewood, N. J. (Phone: South Orange 2-2484).*
PHILADELPHIA—George Isherwood, *590 Rutherford Dr., Springfield, Pa. (Kingswood 30760).*
CHICAGO — A. C. Petersen, *333 North Michigan Ave., Chicago 1, Ill. (Phone: Central 6-6964).*
CLEVELAND—A. E. C. Smith, *P. O. Box 3054, Cleveland 17, Ohio (Phone: Cherry 1-7352).*
PITTSBURGH-BUFFALO AREA—J. D. Parsons, *39 Atlantic Ave., Cohasset, Mass. (Phone: 4-0712).*
CHARLOTTE—W. Cliff Rutland, *Box 102, Gastonia, N. C. (Phone: University 7-7995).*
MIAMI—Ray Rickles, *814 Chamber of Commerce Bldg., Miami, Fla. (Franklin 9-1495).*
LOS ANGELES—L. B. Chappell, *8693 Wilshire Blvd., Beverly Hills, Calif. (Olympia 2-1490).*
EUROPE—Harry Becker, *National Provincial Bank Chambers, 15 Grafton St., Altrincham, England.*

TEXTILE INDUSTRIES is published monthly, with an extra issue in November, at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Contents copyright 1957 by W. R. C. Smith Publishing Co. W. J. Rooke, chairman of the board; R. P. Smith, president. Executive and Editorial Offices: 806 Peachtree St., N. E., Atlanta 8, Ga. Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879. Postmaster, send notices by Form 3579 to 806 Peachtree St., N. E., Atlanta 8, Ga.

THIS MONTH: Contents in Brief

Let Spinners Spin! 79

■ Are your spinners really high-paid cleaners? One mill spinning 30s carded warp yarn found that spinners were spending 61 per cent of their time in various cleaning duties, and only 39 per cent of their time on their basic job of piecing up ends and changing roving.

This mill re-evaluated the spinners' job specifications and limited the cleaning duties to "pass passboard" and "brush and clean rings." A second job study found that more than 86 per cent of the spinners' time was then chargeable to piecing up ends and changing roving, and less than 14 per cent to cleaning.

The elimination of the principal cleaning tasks from the spinners' duties and assigning them to special cleaners not only reduced costs but improved yarn quality.

The article gives the step-by-step procedure for setting up spinners' job loads with limited cleaning.

How Schwarzenbach-Huber Reduced Seconds 86

■ Over the last three years Schwarzenbach-Huber Co. has reduced seconds by 15 to 40 per cent at its Front Royal, Va., plant, on a line of highly diversified and specialized constructions. About 80 per cent of production is on silk; the rest is on Dacron, nylon, acetate, and other man-made fibers.

There are four keys to Schwarzenbach-Huber's success in improving quality: maintenance of correct temperatures and relative humidities, good loom maintenance, good warps, and good housekeeping.

One of TI's editors visited the plant recently, and his report details the steps that are taken by all personnel at the mill to insure that seconds stay at the absolute minimum.

Textile Failures—Causes and Preventive Measures 91

■ Last year 87 manufacturers of textiles went out of business at someone else's expense. These 87 former manufacturers cost their creditors $10,432,000.

But probably of more interest to those who remain in business is why the 87 failed, and what could have been done to prevent it.

Actually, the best means of preventing most of the failures would have been for those concerned not to have gone into the textile business in the first place. Although the textile sample is too small to draw conclusions from it, failures in textiles probably are for the same reasons as in industry as a whole. Out of 2285 manufacturers who failed last year, fully 92.7 per cent did so because they were incompetent, or inexperienced, or both.

The author, James J. Etro, is a member of the public relations department of Dun & Bradstreet, Inc.

Vat Printing at Eureka 103

■ To overcome the shortcomings of the conventional starch-British gum printing thickeners, attention has been focused in recent years on the use of emulsion systems as thickening agents. One such patented system, of the oil-in-water type, has recently been evaluated and adopted by Eureka Printing Co., Clifton, N. J.

The water phase of the emulsion contains the usual ingredients for vat color reduction, plus emulsifiers and water-soluble gums. The oil phase contains only a solvent.

The emulsion paste offers no appreciable cost advantage over conventional thickeners, but its ease of preparation without heat makes it economically attractive. Its greatest economies probably lie in final soaping, where one passage through an open soaper is enough to remove the thickener.

Textile Mill Lubrication—Management's Responsibility 106

■ Textile mill operators can reap the benefits of a good lubrication program—increased production and profits—if they are willing to participate fully in planning and carrying it out, and arrange to use the high quality lubricants specially developed for their needs, declares The Texas Co.'s L. E. Endsley, Jr.

The execution of such a program can best be promoted, he points out, by giving recognition to the importance of it and by training, supporting, and supervising the men responsible for carrying the program out.

Many practical suggestions for doing this, including a check list for managers, are presented.

Warp Sizing 115

■ In the sixteenth article of this series, Dr. Seydel continues his discussion of the slasher room and its equipment, which began in the June issue. This installment covers the various kinds of slasher creels and methods for taking care of the size box rolls, including procedures for re-covering squeeze rolls.

Photo courtesy Beacon Piece Dyeing & Finishing Co., Inc., Beacon, N. Y.

A "Liquid Lock" for textile colors

A significant advance in textile printing occurred with the advent of resin-bonded pigments. These new colors permitted striking patterns in brilliant shades with excellent fastness to sunlight, atmospheric fumes, washing and dry cleaning. But they still left something to be desired on crocking.

Finally a leading textile color manufacturer hit upon a simple solution – one based on CHEMIGUM LATEX. Combined with other materials and easily mixed into the base pigment colors at the printer's, CHEMIGUM LATEX helps form a protective coating against abnormal abrasion. The end result is greatly improved fastness to crocking plus added resistance to washing.

In addition to putting a liquid lock on pigment colors, CHEMIGUM LATEX has many other uses in the processing of textiles. Its high-binding strength, flexibility, light color and permanence plus ease of handling, compounding and applying are finding wide application in binders, coatings, finishes and adhesives of all types.

For full information, including the latest *Tech Book Bulletins*, on how CHEMIGUM LATEX can improve your product, just write to:

Goodyear, Chemical Division, Akron 16, Ohio.

CHEMICAL
GOODYEAR
DIVISION

COATINGS
DEPARTMENT

Chemigum, Plioflex, Pliolite, Plio-Tuf, Pliovic – T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

CHEMIGUM • PLIOFLEX • PLIOLITE • PLIO-TUF • PLIOVIC • WING-CHEMICALS

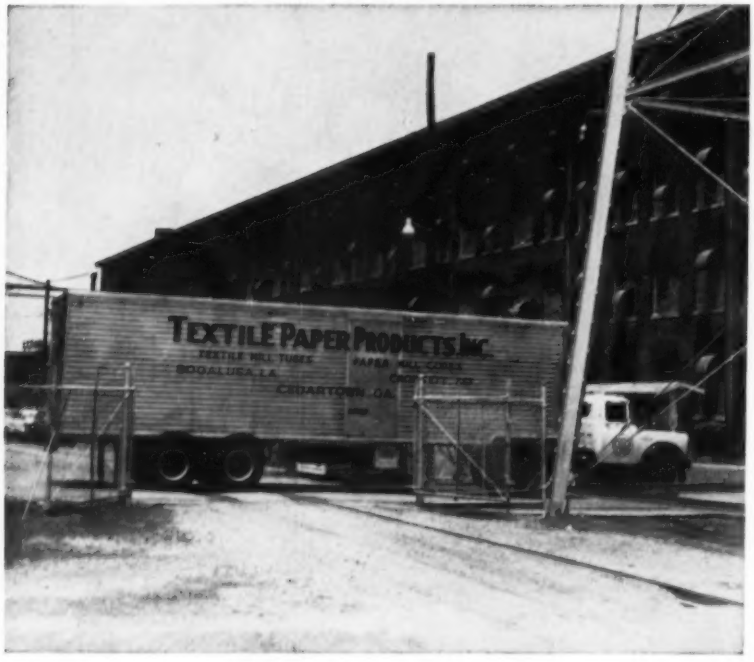
High Polymer Resins, Rubbers, Latices and Related Chemicals for the Process Industries

AVONDALE'S

PERMA PRESSED COTTONS

deserve good tubes . . . and get them

Avondale uses Textile Paper Products tubes



BUYERS OF TUBES rate satisfaction of product first. But they expect and are entitled to more than merely a tube that fits specifications. Well-operated mills want dependable delivery as scheduled. They want prompt service on special orders.

For over 18 years Textile Paper Products has supplied tubes for Avondale Mills, Sylacauga, Ala.

Let us supply you, too, with *good service* as well as good tubes. From our three strategically located plants any mill in the Southeast and Southwest is an "overnight" run by our own carriers. You can depend on Textile Paper Products.

TEXTILE PAPER PRODUCTS, INC.

Manufacturers of better Tubes, Cores, Boards, Car Lining and Beaming Paper

Home Office Cedartown, Ga.
Plants in Cedartown, Crossett, Ark., Bogalusa, La.

Shorts and Remnants

By J. C. C.

► There ought to be a law against it—against inflicting a column like this on readers in August—right here in the middle of summer. So you all go right ahead with whatever you are doing—fishing, fanning, fuming or frolicking—and don't mind ole S&R. Just be on the lookout for this column next month and peruse all that issue featuring *synthetics* — you know, rayon, nylon, Acrilan, Zefran, Parmesan, and all those other things—for September is it, and we hope you like it.

► Now if you have already skipped out—and mind you, we don't blame you—you missed the inquiry from Pellerin Milnor Corp., New Orleans, La., a firm going into the linen supply business. They want to buy as a starter 600 each of 81″ x 99″ sheets, 42″ pillow cases, 20″ x 40″ bath towels; 300 bath mats; 150 bed spreads; 120 bed pads; 360 table tops; 1200 napkins; 120 kitchen towels; 180 shower curtains; 180 dusting rags. They want prices also on volume purchasing.

► Furthermore, you missed "TI Around the World" with **B. K. Pukoff,** Ch. Engr., Moscow, Russia, asking for more data on Aug. '56 Saco-Lowell adv. on "Six Reasons Why"; or **Jos. Wigger,** shuttle manufacturer, Sudlohn, Western Germany, who sends us a letter for Westinghouse Micarta on their May '57 adv. and who wants to make plastic shuttles for Germany; or then there was one from **H. D. Seal,** Governing Director, Church Lane Weaving Mills, Whitwick, Coalville, Leicestershire, Eng., who sends a letter to reach American Cyanamid Co. writing "This letter has been written as a result of our readership of TEXTILE INDUSTRIES"; and then **R. N. Clements** of Ross Whitehead & Co. Ltd., Montreal, Que., Can., sends us two copies of an address by **Donald Eadie, Sr.,** Dir. of Eadie Bros. & Co., Ltd., with a comment by Mr. Eadie on Mar. '57 TI article on "Traveller Speeds" saying that no report more interesting than the Paget report has reached

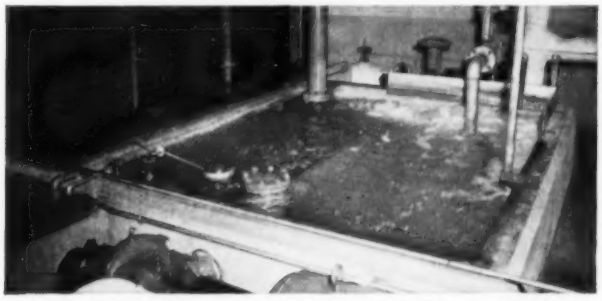
(Continued on page 12)

Why Owens-Corning Fiberglas chose

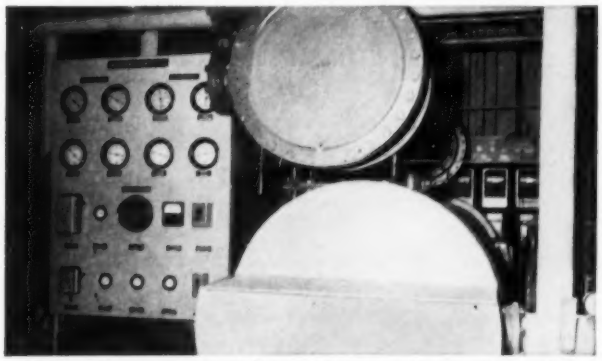
AMCO CENTRAL STATION AIR CONDITIONING

at its Huntingdon, Pa. Plant

Air distribution ducts and zone control atomizers in twisting room at Owens-Corning Fiberglas, Huntingdon, Pa. Widely spaced grille bars and snap-on latches allow quick, easy cleaning and maintenance.



Chilled water reservoir receives excess water from air washers, then recirculates water through chillers as needed.



Refrigeration equipment (chiller at bottom, condenser at top) with indicator and control panel designed and installed by AMCO.

If you want the facts about textile mill air conditioning — central station, unit dry-duct or ductless evaporative cooling — with the advantages and limitations of each system detailed, write for Amco's booklet "Air Conditioning for the Textile Industry". Or better still, ask Amco to recommend the system best suited to your needs. No obligation.

CLOSE-CONTROL HUMIDIFICATION

Owens-Corning, to assure greater operating efficiency throughout its mill, installed an Amco dual (split) system. This system calls for a central station unit augmented by room atomizers which permit the different manufacturing areas to be controlled *independently*, at any point, between 40% and 65% relative humidity.

CLEAN, CONDITIONED AIR

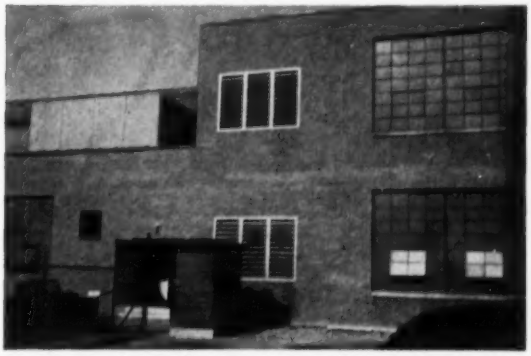
Fresh and recirculated air is thoroughly cleaned and conditioned with the right amount of moisture before distribution by the duct system. Room atomizers raise the moisture content to the level desired for each room, thus assuring ideal conditions for the particular manufacturing process.

CONSTANT YEAR-ROUND TEMPERATURE

Air passed through chilled water spray helps to maintain a year-round 78° F temperature. A total of 550 tons refrigeration capacity keeps work areas independent of outside weather.

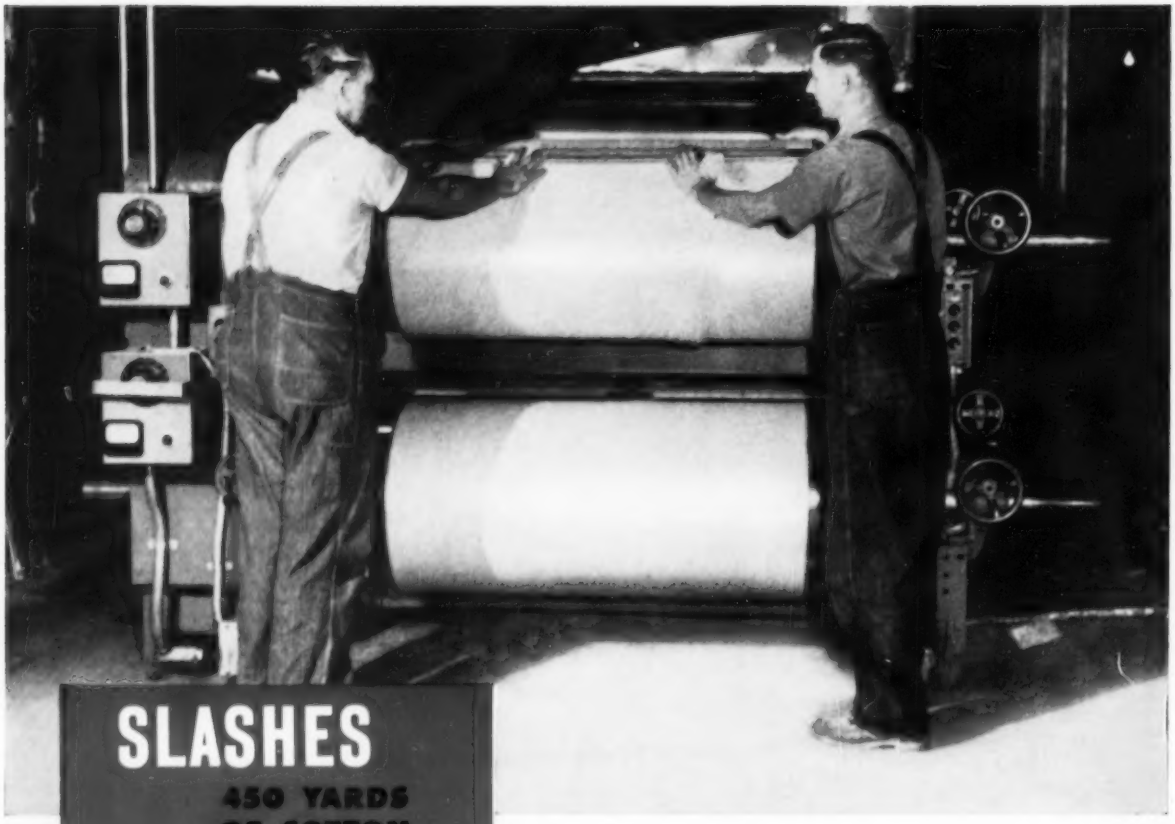
ECONOMICAL OPERATION

A washer bypass takes care of below-maximum heat loads, saving on steam costs. This Amco system also uses steam coils to heat air for supplementary warmth when the weather is extremely cold or when machinery loads are very light.



Exterior view of central station apparatus house at Owens-Corning Fiberglas Corp.

AMERICAN MOISTENING COMPANY, Cleveland, N. C. *Branches:* Atlanta • Boston • Camden • Providence • Toronto



SLASHES

450 YARDS OF COTTON PER MINUTE

This double-beam slasher is powered by a Reliance Packaged Multimotor Variable-Speed Drive, with the automatic drive controls located 20 feet away from the machine, completely out of the way.

This particular mill is slashing 450 yards of cotton yarn every minute, and is running an average of 12 hours per day.

Reliance Slasher Drives give up to 25% greater production at lower cost by winding more yarn per beam.

They are completely packaged, factory wired and tested.

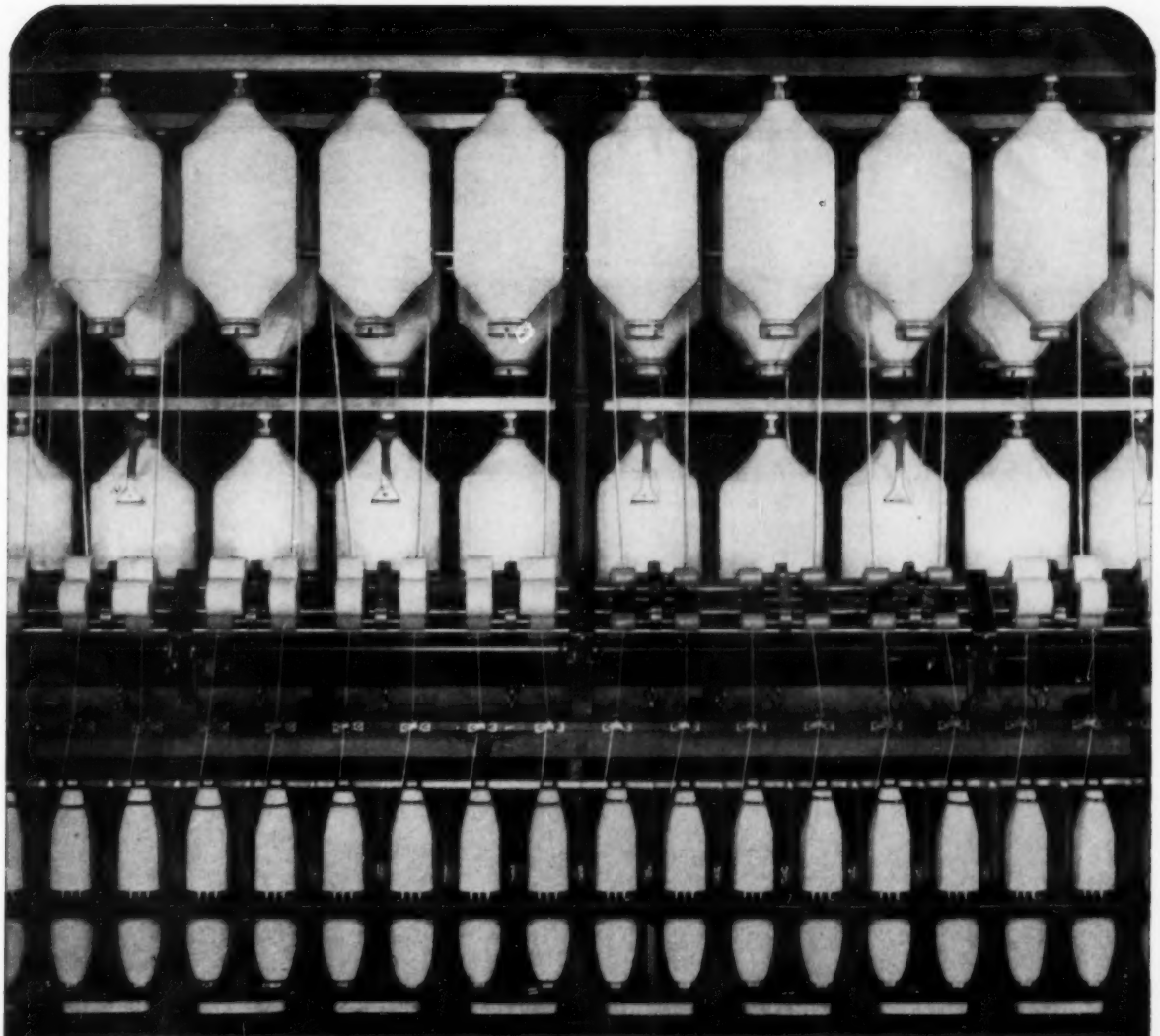
Speed ranges from slow, uniform creep up to high (225 ypm.) line speed. Adjustable speed, heavy duty Reliance Gearmotors supply the drive power. What's *your* drive problem?

Write for Bulletin D-2311 today. D-1513

RELIANCE V★S DRIVE

RELIANCE ELECTRIC AND ENGINEERING CO.

Dept. No. 208A Cleveland 10, Ohio • Offices in Principal Cities
Canadian Division: Welland, Ontario



BIG PACKAGE ROBERTS SPINNING

ALL-NEW—ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

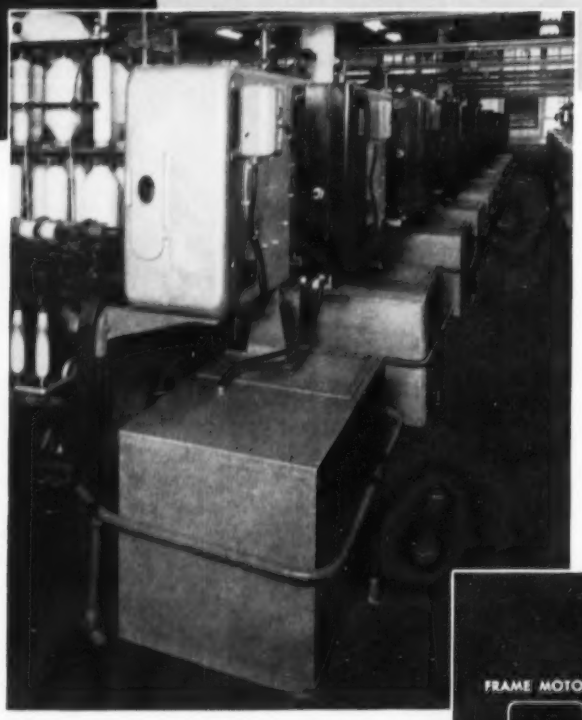
To see it in action or for a trial frame in your own mill, please write direct to...

ROBERTS COMPANY
SANFORD, NORTH CAROLINA

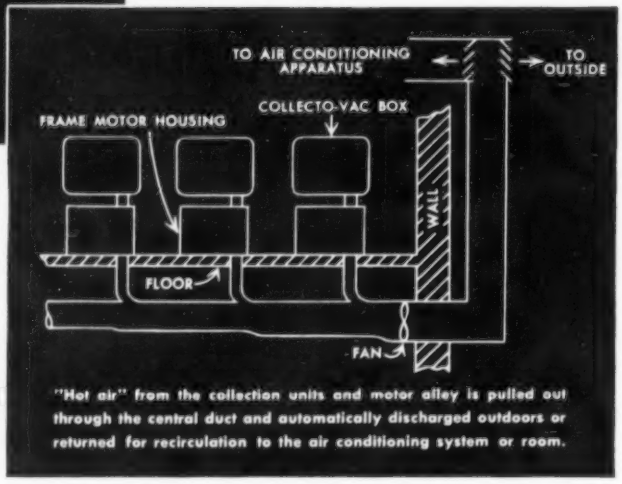
Does three jobs at one time!

NEW! Bahnson Central Heat Removal System

PAT. PENDING



1. Removes frame motor heat thus eliminating concentrated heat in motor alley.
2. Takes out heat added by end collection units.
3. Reduces room heat load to provide more uniform conditions, increase production.



"Hot air" from the collection units and motor alley is pulled out through the central duct and automatically discharged outdoors or returned for recirculation to the air conditioning system or room.

MORE HEAT REMOVAL — Only the Bahnson Central Heat Removal System takes out *approximately two times more unwanted heat* than other designs. This fact, based on comparative field tests, proves the value of the Bahnson system in helping you to improve production efficiency in your mill by maintaining better relative humidity and temperature levels.

IMPORTANT ADDED ADVANTAGES — The unit design and installation of the Central Heat Removal System avoids disrupting production due to single fan failure, and the "quick latch" construction of the frame motor enclosure permits easy access. C.H.R. is adaptable to existing end collection systems with a minimum of conversion.

Bahnson P. M.* Plan

Complete *Package Modernization Plan with new equipment for end collection, cleaning, creels, air conditioning. Offers one-source responsibility and service plus dollar savings.

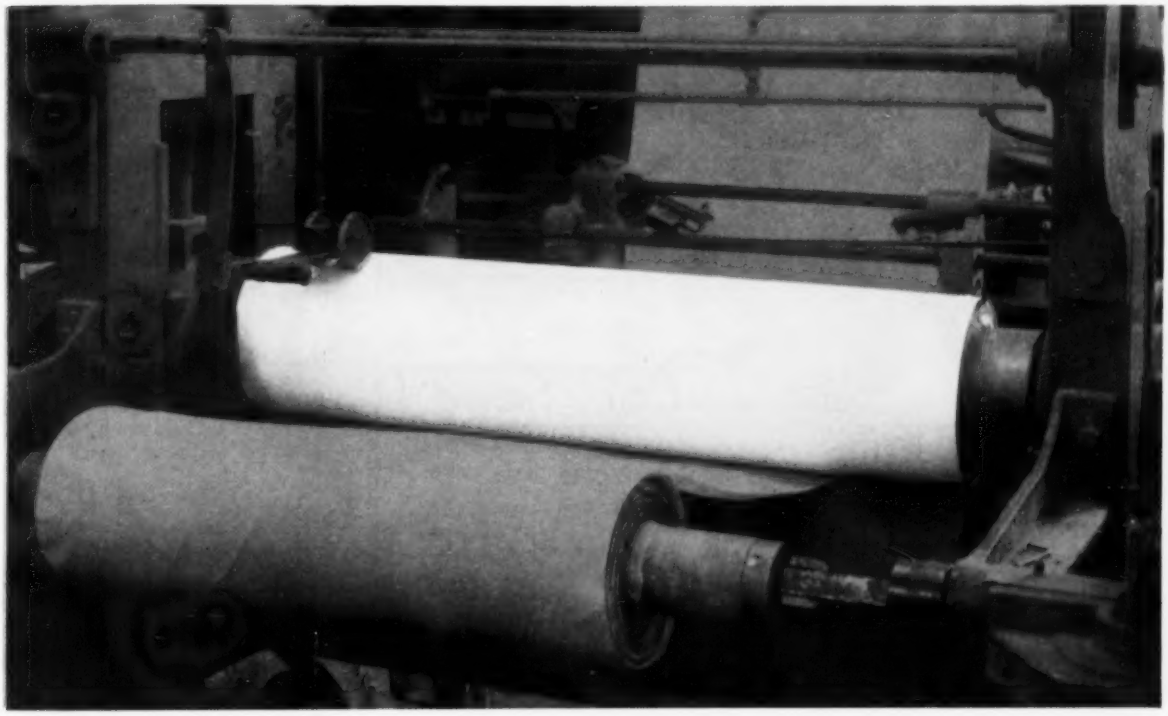
Bahnson COMPANY
WINSTON-SALEM, N. C.

For more information:

Let our representative explain the application and benefits of the Bahnson Central Heat Removal System with regard to your heat problems. Just write or call us.

AIR CONDITIONING / VACUUM COLLECTION / CLEANING / CREELS

DAYCO FINISHING ROLLS



Padder . . . or special application—"job engineering" gives longer roll life, lower costs

Need a roll for padding fine piece goods? Or a special finishing process in your plant?

Either way you'll get the longest, most satisfactory service possible from Dayco Finishing Rolls. That's because they're "job engineered" . . . built to work under the specific conditions of your operation — whatever they may be.

A typical example is a "job engineered" Dayco Roll which has already given over 9 times the service given by previous rolls. It is being used as a back-up roll on a coating process.

The mill originally tried a special rubber roll covering. Average life of the covering was only sixty days.

The Dayco Roll Engineer, asked for a recommendation, studied the operation. He found that the roll had to be extremely soft with a low compression set and good resiliency. Dayco rubber technicians developed a special compound, a roll was covered and installed.

Now after a year and a half of operation, two shifts a day, five days a week, the Dayco Roll is still giving excellent service, shows no signs of impending failure. Former excessive roll costs have been eliminated. In addition, the mill feels the Dayco Roll has helped control the quality of the cloth by giving a more uniform cushion to the coating drum.

The Dayco Roll Engineer will be glad to help you solve your roll problems. Write or wire him, collect, at The Dayton Rubber Co., Holfast Div., 1486 Lakewood Ave, Atlanta, Ga.

Dayton Rubber

THE DAYTON RUBBER CO., DAYTON 1, OHIO

West Coast Distributor, Tillicum Rubber Co., Lacey, Washington

THE DAYTON RUBBER CO., Holfast Div.
1486 Lakewood Avenue, Atlanta, Georgia

Gentlemen:
Please rush me "All the Money-Saving Facts about the New Dayco Finishing Roll."

Name _____

Position _____

Company _____

Address _____

City _____ **State** _____

Lockheed

Launches the Jet-age in

GEORGIA...

Where Life is Fun to Live!

Lockheed teams with the State of Georgia in inviting you to join over 18,000 people who are happily making the most of work and fun in a State that's well geared to both. These people pour into the vast production acreage of the Lockheed aircraft plant at Marietta from 40 Georgia counties, and in 1956, poured back into their communities over a $100 million payroll.

Now expanding in many phases of operations, Lockheed's seven year old plant ranks with the first six aircraft factories in the country and produces the famed C-130 Hercules propjet transports and B-47 six-jet bombers for the U. S. Air Force. The attractions for an industry of this size and import are many: mild climate, ample water, suitable terrain, gas and electricity economical, and construction costs 11% below the national average. The attractions for the people who work and *live* here are equally as favorable: spirited community activities, pleasant residential areas, well organized schools and churches, lakes and mountains with superb fun facilities.

Yes, it's great to live and work in Georgia . . . for pleasure and for profit. Why not call, wire or mail the coupon for more detailed information on industrial locations suitable to your operation. All inquiries handled in strictest confidence, of course.

Georgia Where Industry is Moving Forward

MAIL TODAY—PROFIT TOMORROW

Scott Candler
Secretary of Commerce
Georgia Department of Commerce
100 State Capitol
Dept. LL87
Atlanta 3, Georgia
Phone: JAckson 3-1706

Send me the facts about Industrial Georgia, especially concerning_____

Name_____ Position_____

Company_____

Address_____

This message sponsored jointly by: The State of Georgia, The Georgia Chamber of Commerce and Lockheed Aircraft Corporation.

Shorts and Remnants

him during the course of his business career.

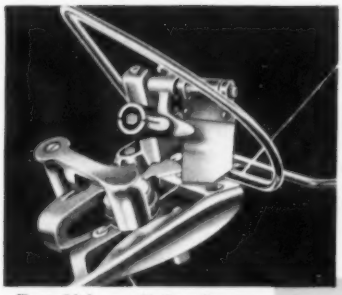
► A telephone call from Greer, S. C., requests copy of Mar. '57 issue pronto for **E. B. Lancaster,** J. P. Stevens & Co., Inc., prompting a little side bet that he is after extra copy of that article on traveler speeds. By the way, reprints of it are now available. One prominent spinning mill supt. had this to say about the 10,000 rpm traveler speeds: "They could only do it in an air conditioned spinning room."

► Who says you have to have bathing girls in Aug. We like Miss "Correct Posture of 1957" whom Royal

Metal Mfg. Co. thinks will be interesting to good textile readers (it's a Royal chair).

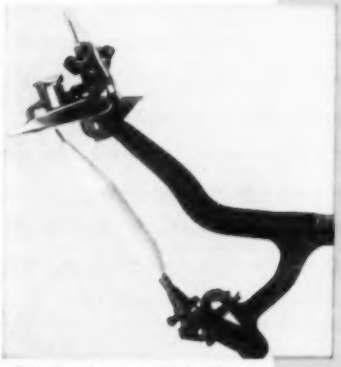
► June S&R offered some more reprints "free for nothing" to clean out our editors' files. Among those sending requests to date are: **W. R. Otey,** Supt. Standards Dept. Chicopee (Ga.) Mfg. Corp.; **George E. Tucker,** Supt. Industrial Eng., Celanese Corp. of Amer., Cumberland, Md.; **W. E. Eubanks,** Quality Control Engr., Con-Mills Corp., Dwight Div., Alabama City, Ala.; **Wm. F. Blair,** Supt. Seller Dyeing Co., Saxapahaw, N. C.; **James A. Luscombe,** Engr. S. E. Cotton Gin-

(Continued on page 16)



Type 51 A — self threading tension and slub catching attachment.

Easy doffing. Package holder swings out.



Supply skewer which always swings back into place after doffing.

Typical worsted cone.

6 ADVANTAGES YOU WANT *in a wool and worsted winder*

Here are six things which you (or any mill man) want in a wool and worsted winder and which can be obtained with a Foster Model 102.

1 **HIGH PRODUCTION.** This machine will produce twice as much as an obsolete model, being capable of winding speeds up to 700 y.p.m. (One mill that we know of is running 80's worsted at 400 y.p.m.). It can be built to wind 7" traverse packages, if desired.

2 **LOW OPERATING COST.** Approximately ⅓ less than that of obsolete models. Labor saving features include self threading tension devices, easy doffing, efficient knock-off mechanism, and a supply skewer for single mule spun yarns which always swings back into place and prevents a mule cop from jumping off; it also permits a single balloon which reduces breakage.

3 **LOW MAINTENANCE AND REPAIRS.** A specially trained mechanic is not required to maintain this machine or make changeovers. Hardened steel or porcelain parts minimize cutting and grooving by hard twist yarns. Repair costs run as low as $3.50 per year per 100 spindle machine.

4 **A GOOD PACKAGE.** Angle of wind may be varied between 9° and 18° by means of simple gear changes. Thus, the *correct* angle of wind for any given type or count of yarn is obtainable, and firm, well shaped packages are assured. Yarn may be conditioned, if desired.

5 **A CLEAN YARN.** Our Type 51-A Tension and Slub Catching Attachment will break out slubs or other imperfections. Thus, burling and mending costs are materially reduced.

6 **FLEXIBILITY.** In case the types of yarn you produce change, angle of wind and taper on Foster Model 102 may be changed accordingly, to handle any kind and count of staple yarn and to produce warping cones, knitting cones, parallel tubes, short traverse tubes, or dye packages.

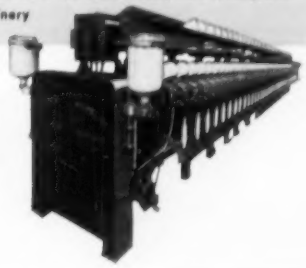
Send for Bulletin A-95.

FOSTER MACHINE COMPANY

Westfield, Mass., U. S. A.

Southern Office — Johnston Bldg., Charlotte, N. C. • *Canadian Representative* — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont.

European Representative: Muschamp Textile Machinery Limited, Keb Lane Bardsley, Oldham, England



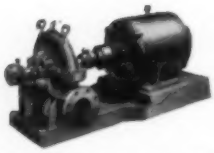
FOSTER MODEL 102

The Flexible Winder

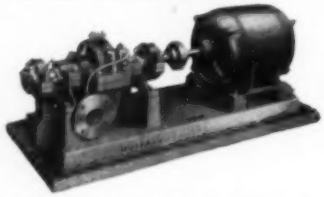
FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS

"BUFFALO" BUILDS A "CUSTOM" PUMP FOR EVERY JOB IN YOUR PLANT

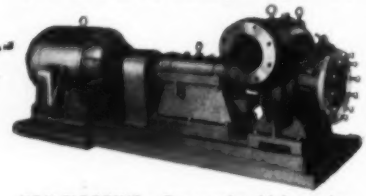
(at REGULAR pump prices!)



CLEAR WATER — For clear water service there is no more efficient pump than the double-suction "Buffalo" Type "SL". Its hydraulic balance, its free-flow water passages and husky construction mean economical service over many years. Capacities from 10 to 14,000 gpm. Write for Bulletin 955.



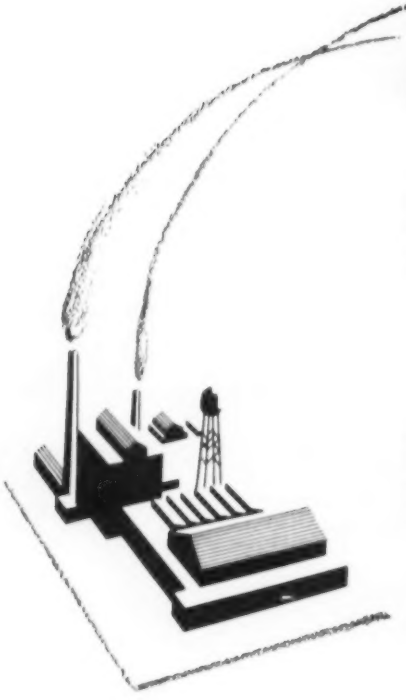
HIGH PRESSURE — "Buffalo" Type "RR" Multi-stage Pumps combine rugged strength and efficiency on boiler feed and other clear water service, against heads as high as 1500 feet, in capacities up to 900 gpm. Shafts are extra-heavy with ball bearing support on both ends — stuffing boxes are deep. Write for Bulletin 980 for all engineering details.



NON-CLOGGING — For moving high-consistency liquids, "Buffalo" Diagonally Split-Shell Pumps offer freedom from expensive shutdowns. And since efficiency does not depend on close impeller clearances, there is no problem of "wedging" and wear. Available rubber-lined for corrosive or abrasive liquids. Write for Bulletin 953.

HEAT TRANSFER — "Buffalo" Heat Transfer Pumps are specifically designed for high-temperature liquids. Successfully used in large installations, they employ special water-cooled bearings and packing, plus suitable alloys — built into our basic, efficient single-suction, solid shell design. Write for engineering details.

CHEMICAL LIQUIDS — "Buffalo" builds 10 special types of chemical pumps in a wide choice of trim for almost any corrosive, abrasive or high-consistency liquid. Above is a single-suction, full ball bearing model. Write for Bulletin 982 and check this wide selection.



Because "Buffalo" builds a *complete* line of pumps tailored to the liquid-moving applications of every industry, you get all the benefits of a custom-designed pump — without paying a "custom" price. You can match a "Buffalo" Pump to your exact conditions — and enjoy the high efficiency, easy maintenance and long life that only such a pump can deliver. Shown here are some of the types — simply write us about your problem, and we'll recommend the *right* pump!

ALSO . . . *"Buffalo" Close-Coupled Pumps, Sump Pumps, and Raw Sewage Pumps — all with the "Q" Factor, or built-in Quality which provides trouble-free satisfaction and long life in every "Buffalo" product.*

"Buffalo" PUMPS

BUFFALO PUMPS

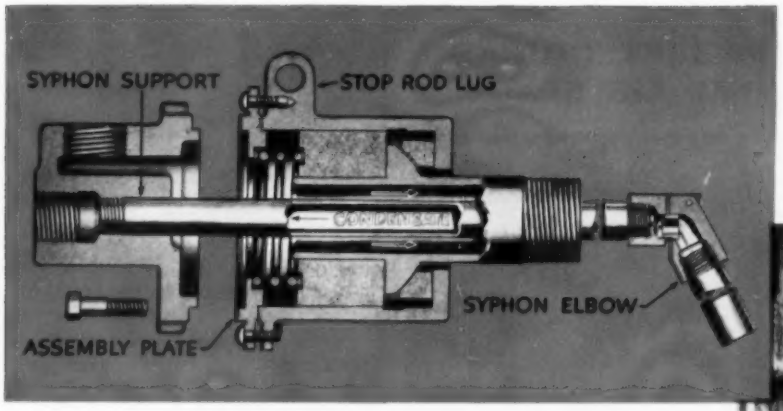
Division of Buffalo Forge Co.

175 MORTIMER ST. • BUFFALO, N. Y.

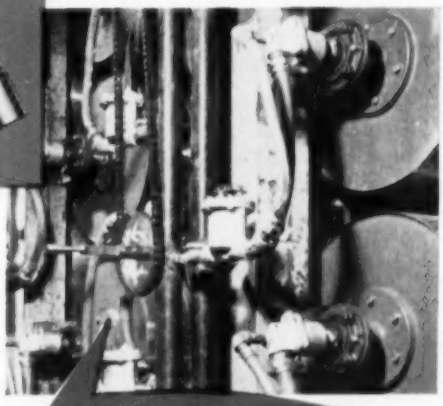
Canada Pumps, Ltd., Kitchener, Ont.

Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID



TYPE S-B2P Johnson Joint with Syphon Elbow. This is a completely self-supporting unit; the lug shown on body is for simple stop rod to keep joints from turning. Installation view shows these joints installed on dry cans.



These are the ones to use...

For 23" dia. Dry Cans and 30" dia. Slasher Cylinders

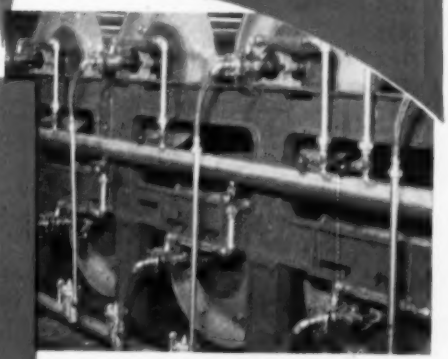
JOHNSON *Rotary Pressure* JOINTS with JOHNSON SYPHON ELBOWS

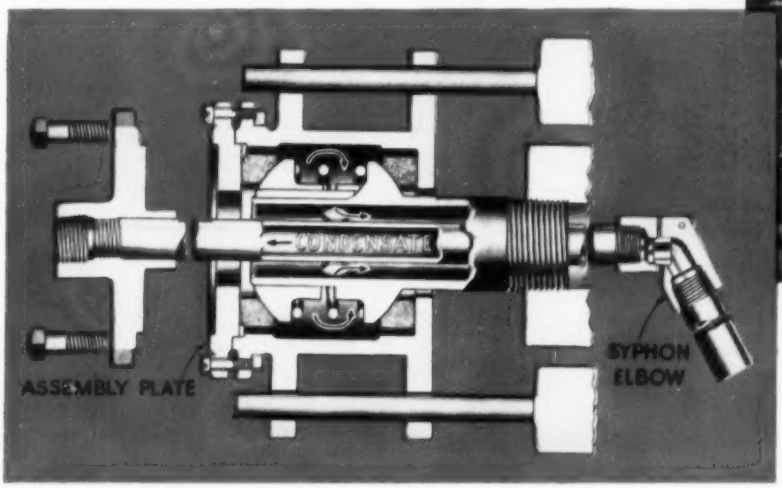
These two types of Johnson Joints have proved particularly suited for service on the newer 23" diameter Dry Cans and 30" diameter Slasher Cylinders. The Type S is completely self-supporting; the Type LJ is rod-supported from bosses provided by machinery manufacturers. Both types are completely packless, need no lubrication or adjustment.

Pictured with each joint is the Johnson Syphon Elbow, successor to the unwieldy curved syphon pipe. It hinges to pass right through the joint, seats of its own weight when in position, permits the use of two simple straight pipes for the syphon line. Special assembly plate is provided on joints so the head and syphon pipe can be removed without disassembling the joint.

Here's our offer—We will gladly furnish a pair of Johnson Joints for 90-day trial in your own mill, without cost or obligation to you. There are Johnson Joints for all operating conditions.

Write for full information





TYPE L-J5P Johnson Joint with Syphon Elbow. Has lugs on body for support rods, which carry all weight of body and connections, permit rotating assembly to "float" freely inside. Steam inlet is in side of body as shown in installation view of joints on slasher cylinders.

THE JOHNSON CORPORATION

815 Wood Street, Three Rivers, Michigan

Rotary Pressure Joints • Direct Operated Solenoid Valves

SPARTAN MILLS USE LIFT TRUCKS TO CASH IN ON "FREE AIR SPACE"

SPARTANBURG, S. C. — Spartan Mills take full advantage of their high warehouse ceilings to sharply reduce storage costs and improve operating efficiency.

Using Hyster 2000 lb. and 4000 lb. capacity lift trucks, loom beams, flat cloth bolts, cloth rolls and cotton bales are stacked in the "free air space" —utilizing convenient storage space that had been previously wasted. Costly yard space and the necessity of purchasing additional warehouse space have been eliminated.

Awkward, heavy hand-labor jobs, such as moving looms, unloading bales from trucks and in-plant hauling are handled up to five times faster with the two Hyster Lift Trucks. Replaced manpower has been diverted to more productive operations.

Your Hyster Dealer makes it his business to keep up with the materials handling problems of the textile industry. He is able to help *you* make important materials handling savings. Call him today.

ABOVE: Bales are stacked five high, three bales at a time, utilizing space near ceiling.

LEFT: Hyster 2000 lb. capacity Truck unloads incoming cotton bales two at a time.

Call your Hyster Dealer. He is in the yellow pages under "Materials Handling" or "Trucks-Industrial"

HYSTER COMPANY

Hyster Industrial Trucks Reduce Costs for Textile Mills

Factories: PORTLAND, OREGON
DANVILLE, ILLINOIS
PEORIA, ILLINOIS
NIJMEGEN, THE NETHERLANDS

Shorts and Remnants

ning Res. Lab., Clemson, S. C.; **Gerardo Pozas,** Quality Control Dept., Hilados Del Norte, S. A., Monterrey N. L. Mex.

► *The Sylacauga (Ala.) News* for May 23 reprinted a page of pictures from "A Job at Avondale Is a Partnership" (May '57). And Jesse Ellington, the TI associate editor who wrote the article, was honored in the May 20 edition of *The Avondale Sun* by a front page item which said in part: "TEXTILE INDUSTRIES, one of the outstanding trade publications in the country, did a notable job of sizing up Avondale. . . " That's us Editor W. G. (Bill) Irby was referring to, folks! And he even ran Jesse's picture. Thanks, Mr. Irby. We aren't accustomed to such treatment, but we surely do like it.

► We're still getting requests for those charts, "How Well Off Is The American Textile Worker?" Here are some who recently asked for it: **J. D. Callahan,** Personnel Mgr. Monarch Mills, Union, S. C.; **J. S. Bonner,** Dir. Personnel, Lane Cotton Mills Co., New Orleans, La.; **Robert B. Dresser,** Associated Industries, Providence, R. I.; **J. B. Owens,** Personnel Mgr., Glenwood Mills, Easley, S. C.; **Lem Coley,** Personnel Dir., The Russell Mfg. Co., Alexander City, Ala.; **Ben H. Crawford,** Southeastern Eng. Co., West Point, Ga.; **Welsford Bishopric,** Treas. Spray (N. C.) Cotton Mills; **B. W. Stroupe,** Personnel Mgr., Judson Mills, Greenville, S. C.

► You can get out your magnifying glass to pick out your favorite Steel Heddle Mfg. Co. salesman from the picture below of a recent sales meeting at Greensboro, N. C.

Back row left to right: **B. B. Stevens,** Dist. Mgr., Greensboro; **J. G. Parnell,** Sales Eng., Greensboro; **H. B. Glover,** Plant Supt., Stedco; **Sam Zimmerman, Jr.,** Dist. Mgr., Greenville, S. C.; **D. W. G. MacIntyre,** Dist. Mgr., Atlanta, Ga.; **B. D. Pritchett,** Sales Eng., Atlanta, Ga.; **D. L. Batson,** Dist. Mgr., Greenville, S. C.; **W. A. Goodwin,** Sales Eng., Lawrence, Mass. Front row: **H. I. Cash,** Sales Eng., Greensboro; **W. F. Hixon,** Sales Eng., Greensboro; **J. C. Jacobs,** Sales Eng., Atlanta, Ga.; **Everett Lail,** Sales Eng., Greenville, S. C.; **A. J. Kieny,** Product Mgr., Philadelphia, Pa.; **J. J. Kaufmann, Jr.,** Executive Vice-President, Greenville, S. C.; **H. P. Goodwin,** Southern District Sales Mgr., Greenville, S. C.; **J. M. Neuffer,** Sales Eng., Greenville, S. C.; **T. Starmont,** Plant and Product Mgr., Greensboro, N. C.

FRANZ MÜLLER

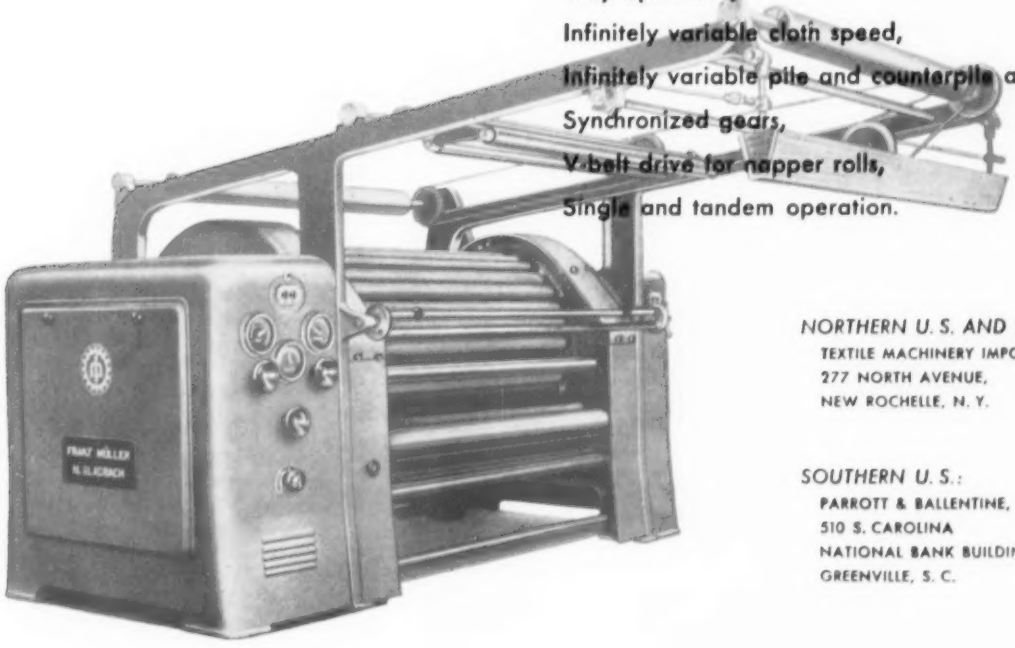
More than 100 years ago

Franz Müller founded the company known today as Franz Müller, Maschinenfabrik, M.Gladbach. He eventually specialized in building textile machines and was the first one to construct a napper of rigid, horizontal design. Constant experiments proved, however, that adopting the planetary principle for the napper rolls produced much better results, and Franz Müller built the first fourteen-roller planetary napper - the proto-type of all similar nappers to follow.

In those days the first planetary napper startled the textile industry. Today the Franz Müller TRI-Napper has conquered the world's largest textile markets.

The FRANZ MÜLLER TRI-Napper offers you -

Higher production,
Better napping quality,
Easy operation,
Infinitely variable cloth speed,
Infinitely variable pile and counterpile action,
Synchronized gears,
V-belt drive for napper rolls,
Single and tandem operation.



NORTHERN U. S. AND CANADA:
TEXTILE MACHINERY IMPORT CO.
277 NORTH AVENUE,
NEW ROCHELLE, N. Y.

SOUTHERN U. S.:
PARROTT & BALLENTINE,
510 S. CAROLINA
NATIONAL BANK BUILDING.
GREENVILLE, S. C.

FRANZ MÜLLER · MASCHINENFABRIK · M.GLADBACH (GERMANY)

THE TEXTILE INDUSTRY *Banks on* BIJUR AUTOMATIC LUBRICATION

In hundreds of mills Bijur Automatic Lubrication is paying big dividends in increased production and lower operating costs.

With Bijur, a machine oils itself —while running. You profit from increased production on every machine. There are no stops for oiling and bearing failures are virtually eliminated.

When your machines are Bijur-equipped, even the most inaccessible bearings get the right amount of filtered oil at the right time.

Your operating costs are cut: oil spots on work are eliminated, personnel injuries are avoided, fire risk is reduced, oil consumption is cut greatly by accurate metering, and you enjoy better housekeeping.

Leading textile mills are banking on Bijur Automatic Lubrication. Let us show you how we can help you do the same.

65 2368

Colorful, new bulletin, "From Fibre to Fabric," shows the practical benefits that Bijur Automatic Lubrication offers to the Textile Industry. Write for your copy.

BIJUR
LUBRICATING CORPORATION
Rochelle Park, New Jersey
Pioneers in Automatic Lubrication

Shorts and Remnants

► Another good TI advertiser, Corn Products Refining Co., has a new trademark as shown with **Wm. T. Brady,** Pres., accepting symbol from **Harley Earl,** designer.

► Current encouraging reports on increased textile operation and some firming of prices come just in time. One of our good textile suppliers sends the following (supposedly on a sign in an Atlanta hospital window):

One day as I sat brooding, sad and melancholy,
A voice came to me out of the gloom saying "Cheer up, things could be worse."
So I cheered up
And, sure enough,
Things got worse.

► Borrowed from "The Houghton Line" Apr. '57:

"According to the wife of a Midwestern friend a fishing pole is a stick with a worm on each end."

"As the beaver said to the tree: 'It's been nice gnawing you.'"

► Hot weather must have set in. Holub Industries, Sycamore, Ill., sent a write-up and folder on a good textile item—"Tape-Mate" revolutionary fish tape winder! A news clipping was received on the efforts of a U. S. official writing Washington, D. C., businessmen to go without ties during hot weather, and someone adds: "Go without a tie if you must, but don't go without TI." That's us. "TI spelled backwards is IT."

Liked Public Relations Article

"Congratulations on a most interesting public relations article in your April issue [They're From Missouri, pp. 93-98, 137] by Mr. Lever. I am certain the textile industry needs more such programs. . . ."

DONALD W. RICH, JR.
C. H. Masland & Sons
Carlisle, Pa.

► "Circulated throughout the textile world" is the credit to TI by the

10 SOLVAY Technical Bulletins available to you

Select yours from contents listed below

These bulletins include properties, use, storage, handling, testing, analytical procedures and other data from accepted sources, from Solvay's own research and from our vast store of field experience accumulated during the past 75 years. Following is a partial listing of the contents of the individual bulletins:

☐ **No. 4—Calcium Chloride in Refrigeration:** 64 Pages—Properties of Calcium Chloride Brines; Preparation and Maintenance of Calcium Chloride Brines; Industrial Applications of Calcium Chloride Refrigerating Brines.

☐ **No. 5—Soda Ash:** 64 Pages—Properties; Handling and Unloading of Bulk Shipments, Bags and Barrels; Storage; Weighing, Proportioning and Feeding Devices; Sampling and Analysis; Precautions; Conversion Tables.

☐ **No. 6—Caustic Soda:** 84 Pages—Properties of Caustic Soda and its Solutions; Handling and Dissolving; Nature and Advantages of Liquid Caustic Soda; Unloading and Handling Liquid Caustic Soda; Conversion Tables.

☐ **No. 7—Liquid Chlorine:** 60 Pages—Properties; Containers; Safe Handling; Equipment and Accessories; Accident Procedure.

☐ **No. 8—Alkalies and Chlorine in the Treatment of Municipal and Industrial Water:** 92 Pages—Natural Water and its Impurities; Water Softening and its Advantages; Softening Processes; Municipal and Industrial Water Purification; Chemical Feeding Equipment, etc.

☐ **No. 9—The Analysis of Alkalies:** 80 Pages—Procedure for the Analysis of Nine Major Alkalies; Methods; Reagents, Indicators, Standard Solutions Used; Atomic Weights—1952; Temperature Conversion.

☐ **No. 11—Water Analysis:** 100 Pages—Mineral Analysis of Water; Stationary Boiler Water Analysis; Municipal Water Supplies; Railroad Water Supplies; Swimming Pool Waters; Polluted Waters; Reagents, Indicators and Standard Solutions; Conversion Tables.

☐ **No. 12—The Analysis of Liquid Chlorine and Bleach:** 72 Pages—Liquid Chlorine; Sodium Hypochlorite; Calcium Hypochlorite; Reagents, Indicators, Standard Solutions.

☐ **No. 14—Chlorine Bleach Solutions:** 68 Pages—General Properties of Hypochlorous Acid and its Salts; Types of Industrially Important Bleach Liquors; Equipment; Operation, etc.

☐ **No. 16—Calcium Chloride:** 92 Pages—Properties of Calcium Chloride and its Solutions; Unloading and Handling Calcium Chloride in Solid Forms and Liquid; Conversion Tables.

SOLVAY®

Aluminum Chloride • Vinyl Chloride
Caustic Soda • Sodium Bicarbonate
Potassium Carbonate • Chloroform
Sodium Nitrite • Hydrogen Peroxide
Caustic Potash • Ammonium Chloride
Snowflake® Crystals • Soda Ash
Methyl Chloride • Methylene Chloride
Monochlorobenzene • Calcium Chloride
Ammonium Bicarbonate • Chlorine
Ortho-dichlorobenzene • Cleaning
Compounds • Para-dichlorobenzene
Carbon Tetrachloride

Allied Chemical

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

Please send me without cost the following Solvay Technical and Engineering Service Bulletins:

☐ No. 4 ☐ No. 5 ☐ No. 6 ☐ No. 7 ☐ No. 8 ☐ No. 9 ☐ No. 11 ☐ No. 12 ☐ No. 14 ☐ No. 16

Name _____

Position _____

Company _____

Address _____

City _____ Zone _____ State _____

EN-8

GRANITEX

TOUGHENS, DUSTPROOFS CONCRETE FLOORS

Granitex Penetrates Into Pores of Concrete, Figuratively "Vulcanizing" The Surface

Your concrete floors can be *tougher, dustproof* . . . and *oil proof*. One product, Granitex, does all three jobs at once, by penetrating the concrete surface and *sealing* it against wear and tear! Granitex owes its toughness to Devran (epoxy resin), the miracle ingredient that has made other Truscon products outstanding in performance under severe exposures!

GRANITEX PROTECTS YOUR PRODUCTS

It prevents "grit and dust damage" to your products by thorough "surface binding" your concrete floors. Thus, Granitex cuts production and processing costs . . . increases your profits. Clean, sanitary concrete floors are morale builders, too.

Employees just naturally appreciate dust free, attractive floors.

A ball of pure Devran is more resilient than a golf ball . . . will bounce higher when dropped on a concrete floor. It's Devran that enables Granitex to "bounce back" after being subjected to harsh treatment, both physical and chemical.

TRUSCON Laboratories

Industrial Maintenance Division of Devoe & Raynolds Co., Inc.

Send coupon now for free demonstration in your plant. No obligation to you.

TRUSCON LABORATORIES
1700 Caniff, Dept. T-16, Detroit 11, Mich.
☐ Send sales representative for demonstration
☐ Send literature on Granitex

Name_____
Firm_____
Address_____
City_____ Zone_____ State_____

Shorts and Remnants

Durham (N. C.) Sun in commenting on the Abney-Erwin Mills public relations feature article.

Synthetic Latices

"Please send us a copy of 'Synthetic Latices for the Textile Industry' (Jan. '57)."

S. ROWEN
Louis Hornick & Co., Inc.
Haverstraw, N. Y.

Wants Wool Standards

"On page 73 of your June 1957 issue, under 'Commercial Sale of Wool Samples,' we are interested in purchasing wool standards; please advise where we can purchase."

JAMES MILLAR
Revonah Spinning Mills
Hanover, Pa.

► Official standards are obtainable only from U. S. Dept. of Agriculture, Washington 25, D. C.

Waste Reduction (Oct. '48)

"We would like to have two reprints of 'Waste Reduction and Control' by Ben H. Crawford (Oct. '48) . "

JACK H. SCOTT
Carlton Yarn Mills
Cherryville, N. C.

Resin Finishing

" . . . It is noted on page 135 (Chlorine Retention of Resin Finishes, June '57) a reference to a report in the *Textile Research Journal* and TEXTILE INDUSTRIES of the result of a study made by the American Cyanamid Company. It will be greatly appreciated if you will send a copy of these reports or the instructions as to the procuring of same."

IRVING F. BAKER
Supt.
The Ford Mfg. Co.
Waterford, N. Y.

Reprint on Fabric Strength

"I would appreciate it very much if you could send me a reprint of . . . 'Predicting Fabric Strength' (Nov. '56) . . . "

E. A. McMASTER
Dev. Engr.
U. S. Rubber Co.
Winnsboro, S. C.

Want To Buy

E. A. Stanford, West Coast Woolen Mills, Ltd., Vancouver, B. C., Can., wants address of Oliver B. Landis, Inc., to purchase nylon spinning tape (May '57). **J. R. Moore,** Pur. Dept. E.

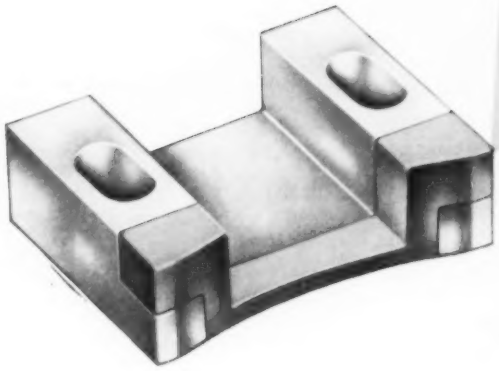
new and the *proven* answer ...

to the Throat Plate Problem for circular knitting machines

ALSiMAG®

SUPER-HARD CERAMIC INSERT

(PATENTED*)



gives long, care-free life to

ACE

Molded Nylon and AlSiMag Throat Plate

(PATENTS PENDING)

ACE Molded Nylon Throat Plates with Wear Resistant AlSiMag Inserts are now available for 400 and 474-Needle machines.

Overcomes disadvantages inherent to metal Throat Plates through amazing life span in service without periodical and expensive down time for polishing and/or regrinding. Eliminates bad work, waste and imperfect quality resulting from cut or impaired metal Throat Plates. Assures increased production, decreased costs and improved quality.

The ACE Throat Plate, which scientifically combines advantages of molded nylon with famous wear resistance of AlSiMag, is strong, light weight, easy to mount and has remarkable wear-free—care-free life, as the only surfaces coming into contact with yarn are those of the hard (8 on Mohs' scale), homogeneous AlSiMag insert and the molded nylon base absorbs impact and vibration.

With ACE Throat Plates in your machines, you have no Throat Plate worries.

For information, sales and service contact:

MARVEL SPECIALTY COMPANY
PADUCAH, KENTUCKY

* AlSiMag Inserts (Titania Guides) covered by U. S. Patents No. 2214703 and No. 2369266, American Lava Corp., Chattanooga 5, Tenn.

A Subsidiary of Minnesota Mining and Manufacturing Company

AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENN.
86TH YEAR OF CERAMIC LEADERSHIP

SALES ENGINEERS: NEW ENGLAND: W. J. Geary, 27 Fairlawn St., Cranston, R. I., Williams 1-4177. NORTHEAST: J. S. Gosnell, 205 Walnut St., Livingston, N. J., 6-1260. NORTH CENTRAL: Minnesota Mining & Mfg. Co., 367 Grove St., St. Paul 1, Minn., Cedar 3071. NORTHWEST: Minnesota Mining & Mfg. Co., 320 Shaw Road, S. San Francisco 10, Cal., Plaza 6-0800. SOU. CAL.: W. L. Thompson, 6023 South Garfield Ave., Los Angeles 22, Cal., Raymond 3-6641. SOUTH CENTRAL: Minnesota Mining & Mfg. Co., 1221 Dragon St., Dallas 2, Texas. SOUTHEAST: James W. Crisp, Poinsette Apts., No. 2C, Greenville, S. C., 5-4172. ALL OTHER AREAS: J. E. Spearman, American Lava Corp., Chattanooga 5, Tennessee, AMherst 5-3411. **REPRESENTATIVES:** CANADA: Ian M. Haldane & Co., P. O. Box 54, London, Ont. ALL OTHER COUNTRIES: Minnesota Mining & Mfg. Co., International Div., St. Paul 6, Minn.

Shorts and Remnants

I. du Pont de Nemours & Co., Inc., Old Hickory, Tenn., wants more on slubbing device of Electro Mechanical Eng. Co. (May '57); **Arthur Karr,** V. P. Laurel Plastics, Inc., Madison, Me., writes for prices on 36 ball bearing 4" & 5" swivel steel or hard fibre casters for use on wood floors; **Harry Friedman,** Harlow Mfg. Co., New York, N. Y., wants prices on special sizes of fibre containers from National Vulcanized Fibre Co. adv. June '57; **W. D. Stegall,** Supt. Belcraft Chenilles, Dalton, Ga., writes for more on American Moistening Co. cleaner adv. June '57;

J. E. Dunn, Pur. Agt., Canadian Cottons Ltd., Hamilton, Ont., Can., wants source of supply for dial indicator gauge for measuring run-out of bottom front roll on spinning frames (May '57). **W. P. Weathers,** Pur. Dept., The Kendall Co., Charlotte, N. C., also wants this gauge pictured in article on yarn quality. So we got data from the author, and its a magnetic baseholder of Enco Mfg. Co., Chicago, with dial indicator of L. S. Starrett Co., Athol, Mass.

"Physical Textile Testing"

"We would like to get about half a dozen copies of 'Physical Textile Testing,' by Mary Jo Wesson. Please advise if these are still available. . . "

C. H. COGGIN
Agt. Columbia Mills
Mount Vernon Mills, Inc.
Columbia, S. C.

► To Mr. Coggin and others inquiring about this most useful reference, our supply was exhausted long ago; however, we hope to publish soon an up-to-date version of it.

► S&R remarks on ICI contributions to dyeing art in the May '57 issue brings following comment in part from **C. W. Mahnken,** V.P. Geigy Dyestuffs, Ardsley, N. Y.:

"Whatever is the chemicals house's contribution toward the uplift of Textiles—'trading up' they call it in the retail level—deserves the support of the Textile Industry, the degree to which contribution is made, major or minor, being dependent on the receptivity thereof in the business."

► **Watson J. Wood,** Knitters Ltd., Lindsay, Ont., Can., is in again with a poem to the lovely girls (see page 12) in S&R, and here it is:

Hence—An Ode To Thee, Sweet Maid.

To thee, sweet maid, let us pass the laurel,
And to thee, sweet maid, dedicate this moral;
To thee we say, may the world bow low,
With thy apparel, thou really stole the show.

Pulleys, gears, motors, spindles, drives—
But for thee, sweet maid, we'd all have hives.
Show us more samples, with your gracious smiles,
And weave those charms into yards and miles.

Machines we have seen, both small and great;
And listened to salesmen rate and prate;
But thee, with thy sweet "Hellocs," gentle one,
Turn our textile chores into so much fun.

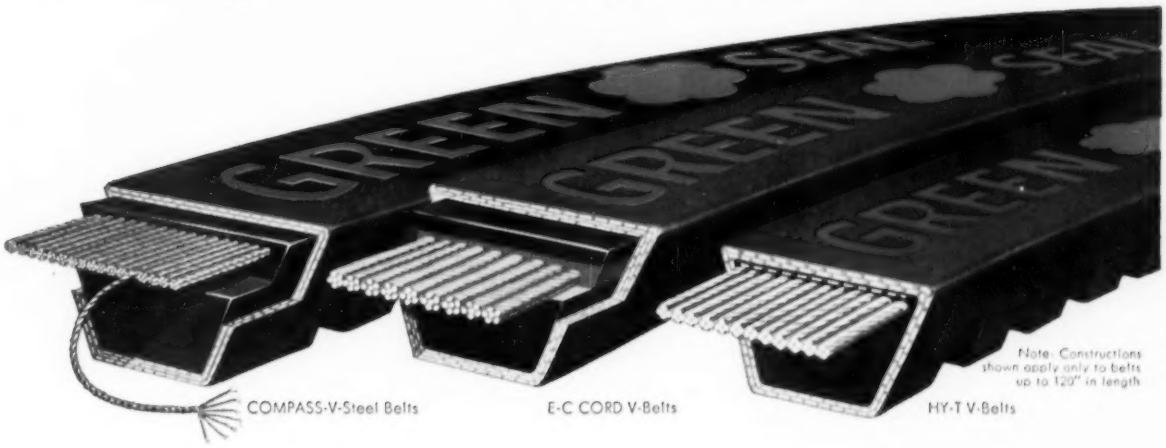
Now we know what makes they loveliness "tick"—
Our textiles truly do the "trick."
Fully dressed, my dear, or as the case may be
This ode must sing—we never see enough of thee!

► That should be about all for a month like August. So watch for these TI specials: Sept. SYNTHETICS, reviewing all types of man-made fibers and yarns with properties, uses, and processing aids; Nov. WET PROCESSING, emphasizing dyeing, bleaching, finishing, printing, etc.; mid-Nov. ANNUAL EQUIPMENT PARADE & BUYER'S GUIDE, featuring largest review of all supplies for textiles along with available literature and sources of supply.

► We'll be seeing you.

TC
TENNESSEE CORPORATION
LIQUID
SULFUR DIOXIDE
HIGHEST QUALITY
SO2
for Effective Removal of
Residual Chlorine!
Tennessee's Liquid Sulfur Dioxide Is a Most Efficient and Economical Antichlor.
SO2 accomplishes the following . .
Acidifies alkaline hypochlorite making it easier to wash out.
Reduces chlorine to the harmless valence Cl-!
Leaves fabric acid free.
Tennessee's Liquid Sulfur Dioxide practically 100% pure, is also very effective as a reducing, bleaching and neutralizing agent, and pH control.
We would like to consult with you on the possibilities of Tennessee's Liquid Sulfur Dioxide in your processing.
Available In:
• CYLINDERS
• TON DRUMS
• TANK TRUCKS
• TANK CARS
TENNESSEE TC CORPORATION
617-29 Grant Building, Atlanta, Georgia

Now—V-Belts with the Green Seal solve the major multiple drive problem



The Green Seal stands for true dimensional stability in V-belts. And with Green Seal dimensionally stable belts you can be sure that matched sets are truly matched and will stay matched—that mismatching (the biggest problem in belting multiple drives successfully) is a thing of the past.

The key to dimensional stability lies in the tension members of the belt. For many years, steel cables as developed by Goodyear were the only length stable load carriers, but now they have been joined by synthetic cords, thanks to the amazing Triple-Tempered 3-T process.

The 3-T process is an exclusive method of tempering the cord with Tension, Temperature and Time for maximum strength and minimum change in dimensions. This assures no change in length during storage plus greatly increased shock- and stretch-resistance on the drive.

The end result is smoother, longer-running teams of belts that give you maximum, trouble-free, horsepower hours at minimum cost. What better reason for specifying V-belts with the Green Seal?

DIMENSIONALLY STABLE V-BELTS with the GREEN SEAL by

GOODYEAR

THE GREATEST NAME IN RUBBER

The Goodyear Tire & Rubber Company, Industrial Products Division, Dept. 794, Akron 16, Ohio

Please send me more information about how V-Belts with the Green Seal solve the major problem in belting multiple V-belt drives.

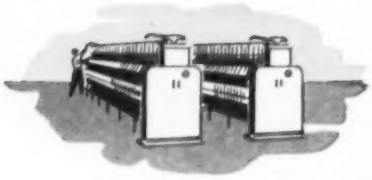
Name_____

Company_____

Street Address_____

City_____ **Zone**_____ **State**_____

Compass, E-C Cord, Hy-T, Green Seal—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio



"They had trouble with oil on thread and floor..."

A large Eastern nylon thread mill had a problem in the lubrication of the vertical guides on their nylon thread winders. Because of the close tolerance between the guide shaft and the traveler, a light oil had to be used. However, the light oil they were using was being wiped off and was dropping on thread and floor.

On one of his routine visits, Sinclair Representative W. E. Suydam was asked for his solution of this problem. Mr. Suydam reports:

"Basing my recommendation on previous experience with problems of this sort, I recommended Sinclair NO-DRIP Oil Light because of its adhesive and cohesive properties. The results amazed the maintenance staff. There was no oil leakage and, instead of four applications per day, only one was necessary.

"Needless to say, the mill changed to NO-DRIP — in fact, they now use Sinclair products exclusively."

To solve your textile lubrication problems, get the benefit of a Sinclair Representative's recommendation. Call your local Sinclair office or write to Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR

NO-DRIP TEXTILE LUBRICANTS

Prevent Costly Damage to Textiles!

Some of the metal detected

New RCA Metal Detector Spots These Troublemakers Before They Can Harm Equipment or Fabrics

At Klopman Mills, High Point, N.C.—one of the nation's outstanding quality mills—the RCA Metal Detector is installed before the shearing machine. It also can be used to protect the calenders in a finishing mill and in other vital locations where material can pass between the aperture that "sees" the tramp metal. It automatically detects metal particles of all types—both magnetic and non-magnetic—even though they may be woven or knitted into the fabric.

FOR SPEEDS UP TO 1000 FT. PER MIN. Used on strip material traveling at speeds from 10 to 1000 ft. per min. with full inspection sensitivity, it will detect a piece of metal smaller than a pinhead (1 mm dia.). Finding particles the eye could never see, the detector can be arranged to sound an alarm, or stop the traveling material.

EASY TO OPERATE. Anyone can operate this equipment with ease and safety because of simple Control Unit design and complete absence of moving parts or exposed electrical connections.

PAYS FOR ITSELF! Wherever installed, RCA Metal Detectors have paid for themselves—two or three times in a year—in longer life of costly machinery, decreased downtime and savings in product. Price in U.S.A. $2650, f.o.b. Camden.

The RCA Metal Detector can be put to work quickly in your plant by maintenance personnel under the supervision of an RCA Service Company expert. Nationwide facilities are available to keep maintenance at a minimum. Get full particulars. Mail coupon.

Mark of RCA Quality Tmk(s) ®

ELECTRONIC METAL DETECTOR

RADIO CORPORATION OF AMERICA
Dept. S-271, Building 15-1, Camden, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

Please send me information on the RCA Metal Detector for textile applications.

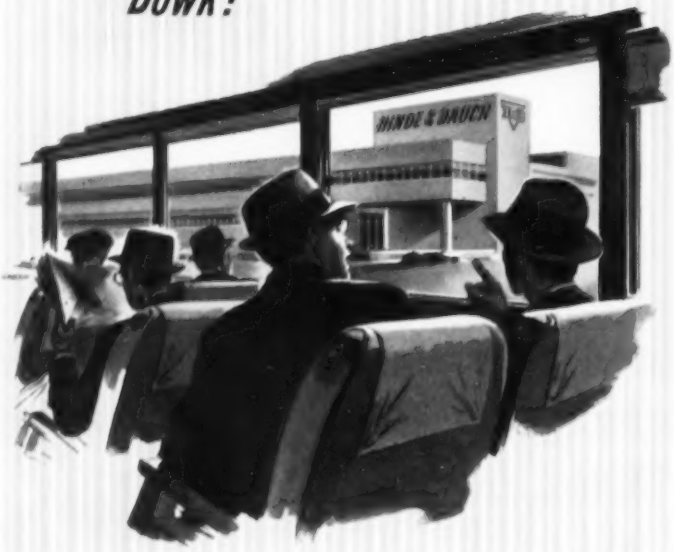
NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

"Dowk?"



We realize Hinde (rhymes with find) and Dauch (pronounced 'dowk') are difficult names to pronounce. We also answer to "H&D." Call us next time you need corrugated boxes.

HINDE & DAUCH

Subsidiary of West Virginia Pulp and Paper Company

AUTHORITY ON PACKAGING • SANDUSKY, OHIO

14 FACTORIES • 42 SALES OFFICES

Personal NOTES

ABOUT MEN YOU KNOW

Among ten recipients of "American Success Story" awards given by the Free Enterprise Awards Association, Inc., for symbolizing success possible under the American free enterprise system was **Leo Honig,** president of Anglo Fabrics Co., Webster, Mass. According to the Association, Mr. Honig is a refugee from Hitler's oppression, having immigrated in 1940 with his family to America where he entered the textile field, using his old-world skills and American machinery and advertising methods to become a leading producer of woolen and worsted fabrics.

P. S. Bailey, president and treasurer of Clinton Cotton Mills and Lydia Cotton Mills at Clinton, S. C., has been elected vice-president of the

Mr. Sibley

South Carolina Textile Manufacturers Association, succeeding **Alan B. Sibley** of Greenville, who stepped up from vice-president to the presidency of the association. Mr. Bailey and Mr. Sibley, along with the retiring president, **Howard B. Carlisle, Jr.,** of Spartanburg, will comprise the association's executive committee during the next 12 months. Mr. Sibley is in charge of 11 mills which produce synthetic, worsted, and blended fabrics for Deering, Milliken and Co., Inc.

Following the three-way merger of Bachmann Uxbridge Worsted Corp., Uxbridge, Mass., American Hard Rubber Co., and Wardell Corp., to form Amerace Corp., **Harold J. Walter,** formerly president of Bachmann Uxbridge, has been named vice-president and vice-chairman of the executive committee of the new Delaware corporation; **Louis Bachmann, Jr.,** formerly executive vice-president, was elected a vice-president; and **Nelson Flanders, Jr.,** formerly vice-

Need New Pickers?

. . . then, think of what you get in ALDRICH PICKERS!

To make a good lap, it is important to keep the vertical calender rolls parallel so that they make perfect contact from end-to-end.

Stick a crowbar in one of your calender rolls and see how much you can wiggle it sideways. When the rolls do not make line contact, the lap is pressed too much in the center and not enough at the selvages, which will be puffy.

Note how the Aldrich lap cheeks are recessed for adjustable gibs, which are held in place against the calender roll bearings by set screws with lock nuts.

The Aldrich calender roll bearings are identical within very close limits, and when held firmly in place with the adjustable gibs, assure line contact between the rolls, and proper calendering.

AldricH MachinE WorkS

Greenwood, South Carolina

QUALITY BY THE POUND . . .

Whichever way you weigh it, experience proves that National-Sterling Ring Travelers consistently deliver more pounds of first class yarn . . . at higher spindle speeds . . . with fewer ends down.

When you specify National, you can be sure that each traveler in each box is completely uniform in weight, dimensions, temper and finish . . . carefully made to meet your exact spinning or twisting requirements. This means that, whether you're running synthetics, blends, or natural fibers, you can depend on every National Traveler for the finest possible performance.

Try them and see! Your nearby National-Sterling Engineer will be glad to recommend the right traveler for your particular operation. Call him now or write National Ring Traveler Company and Sterling Division, 354 Pine Street, Pawtucket, R. I. Southern Office and Warehouse: P. O. Box 293, Gaffney, S. C.

NATIONAL Sterling RING TRAVELERS

F. L. CHASE, JR., Pres. & Treas. L. E. TAYLOR, So. Mgr.

FOR SPINNING AND TWISTING ALL NATURAL AND SYNTHETIC FIBRES

There's a NATIONAL man nearby!

T. H. BALLARD 112 N. 9th St. Belmont, N. C.
F. S. BEACHAM P. O. Box 511 Honea Path, S. C.
H. A. CARTER 354 Pine St. Pawtucket, R. I.
D. C. CREECH P. O. Box 5083 High Pt., N. C.
H. D. LANIER P. O. Box 421 Shawmut, Ala.

Export Agent: A. M. ROMERO CORP., 350 Fifth Ave., N. Y. 1, N. Y.

Personal NOTES ABOUT MEN YOU KNOW

president and treasurer of Bachmann Uxbridge, was elected treasurer. President of Amerace is **Victor T. Norton** of American Hard Rubber.

At Ansan Dyers & Finishers, Inc., New York, N. Y., **Mel Melford** has been promoted to the office of vice-president in charge of sales; **Ira Shapiro** to comptroller; and **Newton Monschein** to production manager.

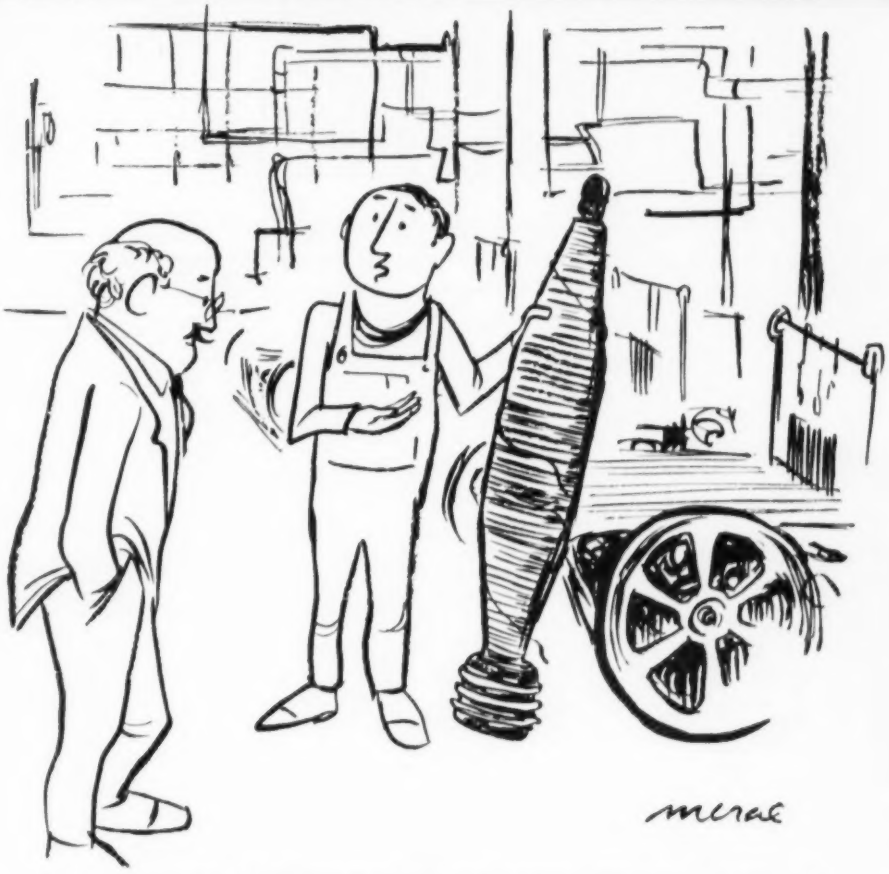
Newly appointed plant manager of Georgia Rug Mill, Summerville, Ga., Bigelow-Sanford Carpet Co.'s tufted carpet plant, is **John C. Cook,** succeeding **Ralph A. Rhodes** who is now vice-president in charge of the Sanford division. Mr. Cook had been assistant for administration and operations. * * * **Joseph Jervis, Jr.,** former plant manager of The Pine Tree Co., Dahlonega, Ga., has been appointed

Mr. Jervis

plant manager of Bristol (Va.) Mills, a Bigelow-Sanford yarn-making operation. Mr. Jervis succeeds **George H. Buckles** who will remain at Bristol as assistant and adviser to the plant manager and will direct personnel activities, purchasing, training, and community relations.

During a recent meeting of the board of Arista Mills Co., Winston-Salem, N. C., **James D. Chandler,** former secretary of the firm, was named vice-president.

At Abney Mills, Anderson, S. C., **Foster McConnell,** overseer of dyeing, has been named superintendent of the Gossett dyeing and finishing plant, succeeding the late A. M. Smith. * * * The Greenwood (S. C.) Chamber of Commerce board of directors recently adopted a resolution, conveying gratitude, admiration, and respect to **F. E. Grier,** president of Abney Mills and chairman of the board of Erwin Mills, for service to "his community, church, state, nation, and industry." Mr. Grier also



"..the yarn mill just sent it over. It's the new giant economy size...."

Seyco means service.

Whether your problem is giant size, small size, medium size, or good size, talk it over with your Seyco man.

He has the experience of 53 years in chemical manufacturing and mill work to call on.

If we have the answer you'll get it; if we don't have it, we'll get it.

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

SEYCO

**SAVE TIME—
SAVE MONEY**
with
MATERIALS
HANDLING
EQUIPMENT

MADE TO YOUR
SPECIFICATIONS
BY
**BENNETT
ROSE**

The BENNETT ROSE COMPANY has the most modern equipment available; operated by skilled craftsmen with years of experience in the manufacturing of Materials Handling Equipment. This is your assurance of Top Quality, Labor-Saving Equipment at Competitive Prices.

For instance . . . Smooth, Easy, Economical Transportation. WOOD, FIBRE AND METAL TRUCKS—OF ALL TYPES—FOR ALL NEEDS.

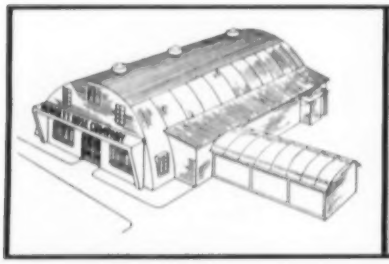
The Fibre Truck, shown at left, is made of genuine vulcanized fibre riveted to 2" steel band framing. 48" long, 23" wide, 30" deep and is equipped with roller-bearing rubber casters.

Trucks of the same style can be furnished of Mild Steel, Painted, Galvanized, Aluminum or Stainless Steel.

We manufacture this popular QUILL CAN or Bobbin Can (shown here) to specifications in three sizes—long, short or half size. We can furnish any type Can for various type looms, any style or design. Send us your inquiries.

Your inquiries for all types of Filling Boxes, Racks, Trucks, Special Equipment and Miscellaneous Items will be appreciated.

Write us for Newest Literature or call: Spartanburg 3-9223.



**BENNETT
ROSE
COMPANY**
P. O. BOX 8
ROEBUCK, S. C.

Personal NOTES
ABOUT MEN YOU KNOW

received editorial recognition from his hometown newspaper when "The Index-Journal" of Greenwood published as its lead editorial a tribute to him in praise of his work.

The election of **Roy H. Niebling** as executive vice-president of Sidney Blumenthal & Co., Inc., has been announced. In his new position Mr. Niebling, who has been resident manager at the company's plants in Rocky Mount and Wilson, N. C., will act as liaison between the mill and its customers. He will be in New York City each week Friday through Monday.

Arthur F. McLean has joined the staff of Bradford (R. I.) Dyeing Association as plant manager. Mr. Mc-

Mr. McLean

Lean was formerly assistant manager of the Glenlyon Print Works, Phillipsdale, R. I.

Robert Bickford, who has been serving with M. K. M. Knitting Mills' Puerto Rican plant, has rejoined Abbot Worsted Co. as general manager of the mill operation at Seneca, S. C. Mr. Bickford had been with Abbot's Lowell, Mass., organization, prior to his service with M. K. M.

Now serving as assistant to head dyer William Hoffman at Botany Finishing Co., Passaic, N. J., is **John Szczech** who was for many years with United Wool Dyeing Co.

Fred Dearnley is now overseer of spinning at Beaverbrook Mills, Collinsville, Mass.

Recently appointed as directors-at-large to the Underwear Institute board of directors for the first time were: **Rodney W. Jones, Jr.,** Augusta Knitting Corp., Utica, N. Y.; **Sol Kittay,** BVD Co., Inc., New York, N. Y.; **Paul G. Reidler,** Ashland Knitting

(Continued on page 36)

Ever See a Pedigree for Latex?

This Quality Report is the FR-S Pedigree...Your Assurance of Latex that Meets Highest Specifications

This Quality Report gives you a complete picture of every pound of FR-S latex you buy. It accompanies *every* shipment, and summarizes the results of more than 50 different tests that control the uniform quality of FR-S—from the purity of the water that flows into the giant reactors, to the physical and chemical properties of your finished product. It's your assurance that you're getting the finest latex man can make . . . modern latex that meets your most exacting specifications in every respect. Why not learn how FR-S can improve your product — just mail the coupon below:

Synthetic Rubber & Latex Div., Dept. A
The Firestone Tire & Rubber Co., Akron, Ohio

☐ Please supply technical information on FR-S Latex.
☐ Please have a Firestone Technical Representative call on us.

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____
Product Manufactured _____

Firestone
BEST IN RUBBER

NEW TWIST IN SPINDLES!

LEESONA

Two-for-One Spindles, Fafnir-equipped, double yarn production

Universal Winding Company's Leesona No. 210 Twister-Coner, equipped with Two-for-One Spindles, combines twisting and precision coning of filament yarn into a single operation.

On Leesona No. 210 Twister-Coners, the Two-for-One Spindles insert two turns of twist for each spindle revolution, thus doubling production per spindle at a given rate of speed.

To assure smooth, vibration-free spindle operation at speeds that range up to 10,000 rpm, Universal Winding equips the spindle rotor — the only rotating member — with Fafnir anti-friction bearings. Wide type ball bearings provide the rigid shaft support necessary in maintaining uniform yarn tension. Where dimensions are limited, Fafnir extra-small ball bearings, with Mechani-Seals and shields, are used to complete this high-precision, contaminant-protected, anti-friction application.

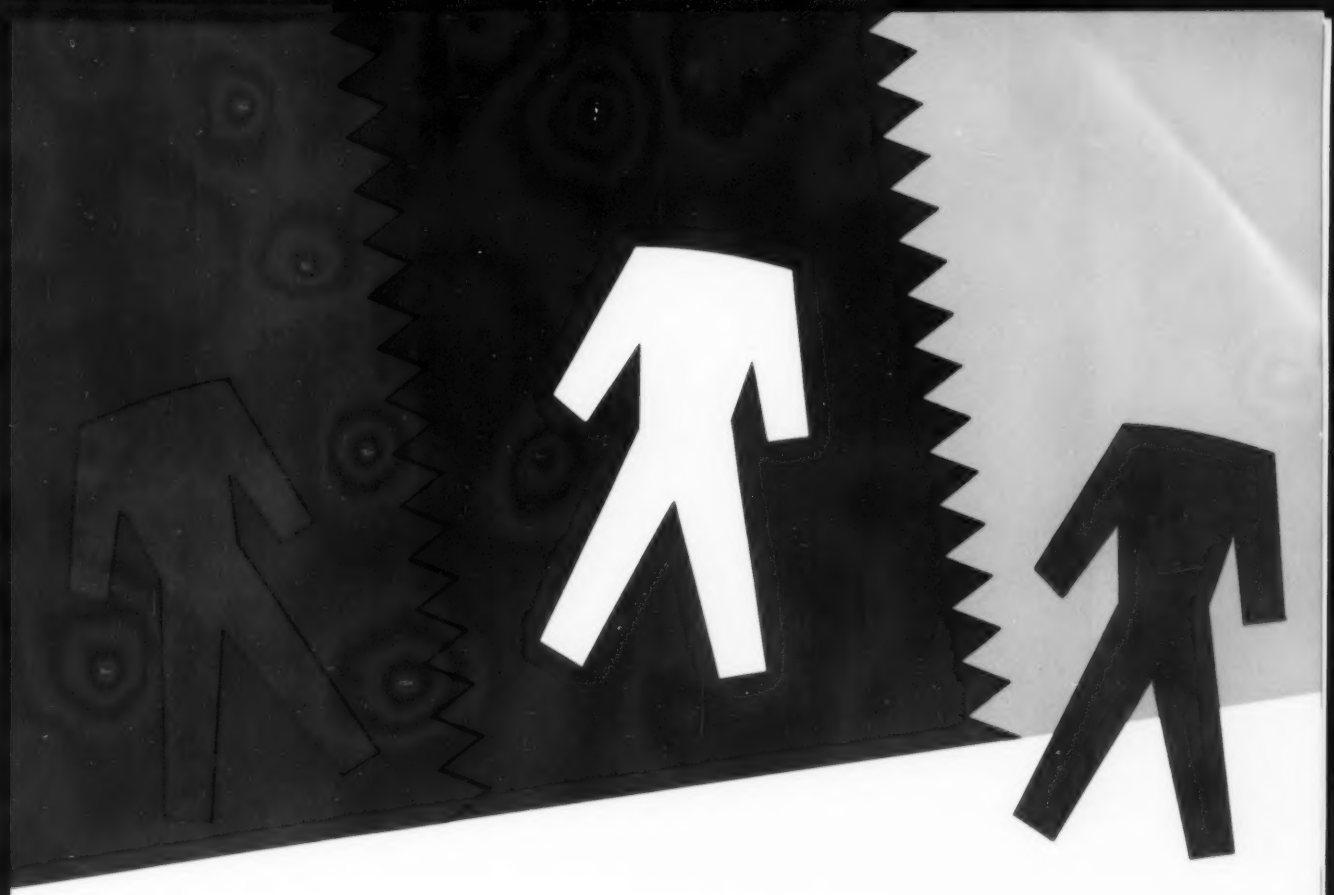
Job-perfect bearing applications such as this are backed by long experience with textile machinery bearing requirements. It's a big plus you get when you turn to Fafnir for help with bearing problems. Write The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

partners in progress...
Universal Winding and Fafnir

Fafnir Wide Type Ball Bearing with Plya-Seals
This bearing, designed to provide greater shaft support within the housing, features two contact-type Plya-Seals, as positive protection against contaminants. Pre-packed with high grade lubricant at the factory, Fafnir Plya-Seal Ball Bearings simplify housing design, last longer, keep maintenance and wear at a minimum.

Fafnir Extra-Small Ball Bearing with Mechani-Seal and Shield
One slinger-type Mechani-Seal and one Shield effectively retain grease and keep out foreign matter in this extra-small Fafnir ball bearing. Frictionless seal and shield permit bearing speeds comparable to those at which open-type bearings can operate. Bearing is pre-lubricated at the factory.



Announcing 3 new "SEVRON"* colors

offering outstanding lightfastness and wetfastness in dyeing "ORLON"* in men's suiting shades

"SEVRON"
RED GL

"SEVRON"
BLUE BGL

"SEVRON"
YELLOW 3RL

Outstanding fastness properties make these three new colors ideal for dyeing "ORLON" acrylic fiber in blends with wool, cotton and rayon in men's suiting shades. Their high degree of compatibility in dyeing rate permits combinations which will produce a complete color range of light to medium tan and gray shades.

Other major advantages of these three new types of chemically unique "SEVRON" colors are: stability over wide variations in dye bath acidity; and very little wool staining in strengths up to 2.0%.

Information on the three new colors and on the entire "SEVRON" family is yours for the asking. Write E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyes and Chemicals Division, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.

Better Things for Better Living . . . *through Chemistry*

Du Pont Dyes

*Registered U. S. Pat. Off.

It's great to start the day this way!!

ENJOYING THE CONTINUING BENEFITS FROM A SACO-LOWELLIZING PROGRAM

This mill executive has solved a major problem — how to better his competitive position. He's done it in the most simple way known to textile men — with a SACO-LOWELLIZING PROGRAM custom made to his particular mill. Basically, this program does 4 things:

1. **Helps you make better use of floor space, thereby improving production flow.**
2. **Coordinates the successive steps in processing.**
3. **Reduces waste, spoilage and unnecessary handling of stock.**
4. **Helps you realize the greatest economies in operating and maintenance costs.**

A SACO-LOWELLIZING PROGRAM IS YOUR ANSWER TO THE QUESTION OF BETTER MILL OPERATIONS AND INCREASED PROFITS. Contact your nearest Saco-Lowell Sales Office — they will have an engineer prepare a "Forecast of Savings" based on a SACO-LOWELLIZING PROGRAM prepared for your mill. There's no obligation.

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N.C. Sales Offices CHARLOTTE GREENSBORO GREENVILLE ATLANTA

for *Softness and Lubricity*

SOROMINE® AL

a white amphoteric softener-lubricant

Improves the Softness, Sewability, and Napping Qualities of Fabrics

SOROMINE AL softens and lubricates cellulosic, synthetic, and animal-fiber yarns and fabrics. It not only imparts a soft, smooth hand, but also reduces fiber-to-metal friction; this serves to prevent "fiber fractures" during high-speed machine sewing and to minimize fabric damage during napping operations. The lubricating action of this compound also facilitates the winding and knitting of yarns. SOROMINE AL can be applied in almost any type of textile-processing equipment, e.g., mangles, padders, jigs, and package machines. Moreover, since it is white and has good resistance to yellowing, SOROMINE AL minimizes fiber discoloration. Write today for further information about SOROMINE AL, the new softener-lubricant.

ANTARA gaf

From Research to Reality

ANTARA® CHEMICALS

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

SALES OFFICES: New York • Boston • Providence • Philadelphia • Charlotte • Chattanooga • Chicago
Portland, Ore. • San Francisco • Los Angeles. IN CANADA: Chemical Developments of Canada, Ltd., Montreal

SOROMINE AL, manufactured by General Aniline & Film Corporation, is sold outside U.S.A. under the trademark, BLANDOPHEN AL.

SOUTHERN STATES CD-2 CARD DRIVE COMBINES INTO ONE UNIT ALL OF THE FEATURES WANTED FOR COTTON CARDS

Here is why we honestly believe the Southern States CD-2 Card Drive is the safest, simplest, most efficient individual drive on the market today:

Finger-tip control. No changes in operating procedure. Unit is controlled by simple clutch lever in both starting and hand stripping.

Full speed in seconds. A 1½ hp high torque card motor brings card into full operation, seconds after clutch is engaged.

Safety engineered. All belts and moving parts are covered. Starting and idling is accomplished by simple clutch lever.

Rugged construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover. Ball bearing throughout.

Easy installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on to shaft using existing keyway.

Get the facts from your Southern States representative or write for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 30)

Mills, Ashland, Pa.; and **W. D. Stedman,** Stedman Manufacturing Co., Asheboro, N. C. Five directors were reappointed.

W. Gordon McCabe, Jr., of J. P. Stevens & Co., Inc., Greenville, S. C., has been elected president of the Wool Associates of the New York Cotton Exchange, Inc. Named first vice-president was **W. Brewster Southworth,** of Nichols & Co., Boston, Mass.

William H. Johnson has been named manager of quality control for Goodyear Tire & Rubber Company's textile mills, a position in which he will be responsible for the direction, management, and administration of all quality control functions of the

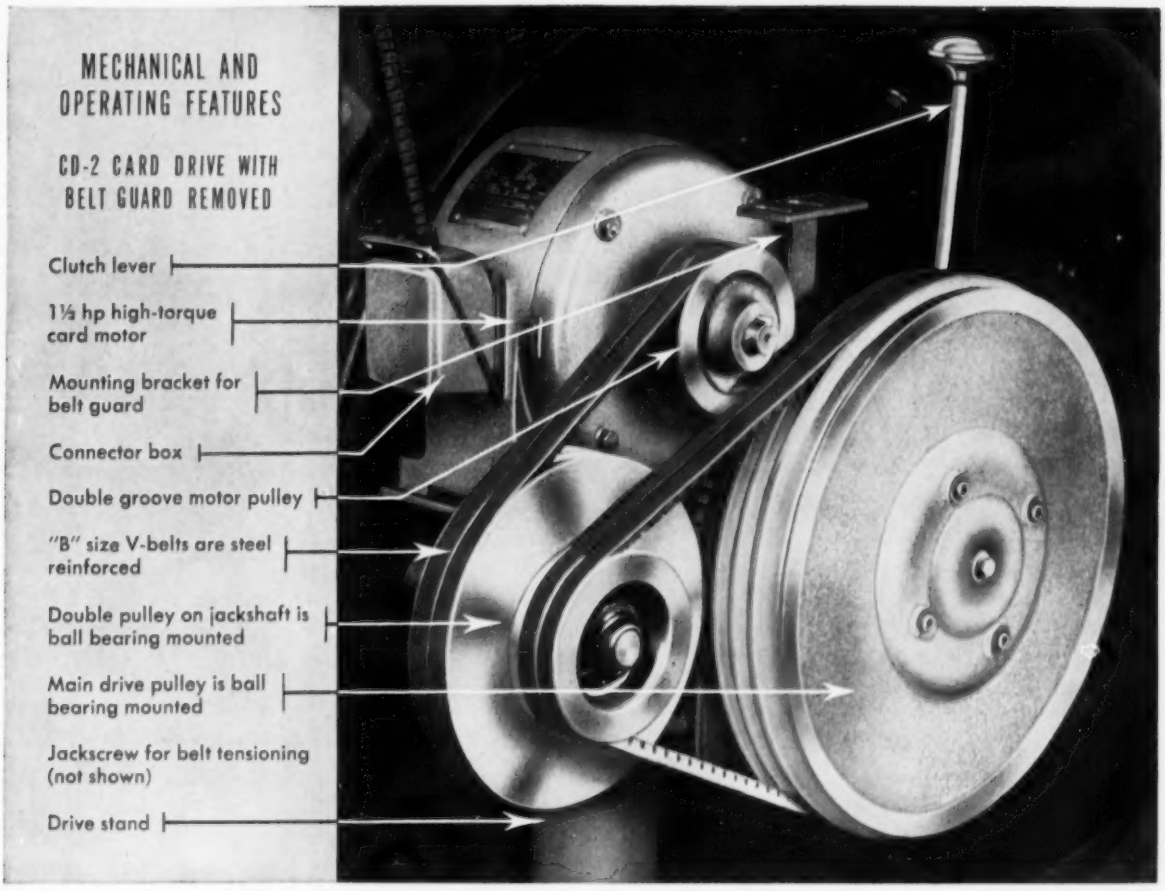
Mr. Johnson

company's mills at Cedartown, Rockmart, and Cartersville in Georgia and Decatur, Ala., with headquarters at the Cartersville mill. Mr. Johnson was formerly manager of supervisional training for the company's textile division.

At Norris Cotton Mills Co., Cateechee, S. C., **Edgar M. Norris** has been named president and treasurer, succeeding **G. F. Norris,** who was made board chairman. **R. A. Taylor,** formerly superintendent, has been named vice-president in charge of manufacturing and also a director of the company.

Newly-named president of Pearce Woolen Mills, Inc., Latrobe, Pa., succeeding the late James B. Corson, is **Robert F. Rich,** who had been vice-president and treasurer. **R. G. Senior,** formerly secretary and general manager, was named vice-president in charge of operations and was also made assistant treasurer, assistant secretary, and general manager. **Roswell Brayton** became vice-president in charge of interplant relations; **F.**

(Continued on page 198)


MECHANICAL AND OPERATING FEATURES
CD-2 CARD DRIVE WITH BELT GUARD REMOVED
Clutch lever
1½ hp high-torque card motor
Mounting bracket for belt guard
Connector box
Double groove motor pulley
"B" size V-belts are steel reinforced
Double pulley on jackshaft is ball bearing mounted
Main drive pulley is ball bearing mounted
Jackscrew for belt tensioning (not shown)
Drive stand

Only the all-new CD-2 Southern States Card Drive offers all these features

THIS WE BELIEVE: The CD-2 individual Card Drive is the simplest, safest, and most efficient drive on the market today. It combines into one unit the features most wanted by mill men when specifying a drive for cotton cards. Here is why:

Finger-Tip Control. No changes in operating procedure. The unit is controlled by a simple clutch lever in both starting and hand stripping.

Full Speed in Seconds. A 1½ hp high torque card motor smoothly brings the card into full operation, seconds after the clutch is engaged.

Safety Engineered. All belts and moving parts are covered. Starting and idling is accomplished by the clutch lever. Stripping is done in the conventional manner.

Rugged Construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover.

Easy Installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on shaft using existing keyway.

Your Southern States representative will give you all the facts, or you may write direct to our home office. Ask for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

The Springs Cotton Mills' lint problems are wrapped up *here!*

The Springs Cotton Mills' Grace Bleachery, Lancaster, S. C. Air-conditioning system designed and installed by Buensod-Stacey, Inc., Charlotte, N. C.

AAF Auto-AIRMAT filters provide lint-free air for Grace Bleachery

You won't find any "lint on the loose" at Spring Mills' Grace Bleachery in Lancaster, South Carolina. Automatic lint filters—AAF Auto-AIRMATS—are standing guard at eight air conditioning systems supplying 120,320 cfm of clean air.

Auto-AIRMAT is the *only* filter designed to remove lint fibres from the air and clean itself at the same time! Airmat filtering material, winding from roll at top of unit, moves automatically down the face of the filter, collecting lint all the way—rewinds into easily disposable roll at bottom.

If you have a *lint problem,* get all the facts on the *lint filter* — AAF's Auto-AIRMAT. Call your AAF representative or write for Bulletin 234.

AAF American Air Filter COMPANY, INC.

275 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

AAF Filters and Precipitators

AAF Dust Control Equipment

BETTER AIR IS OUR BUSINESS

Herman Nelson Unit Heaters

Illinois Heating Specialties

PAGES MISSING

The Springs Cotton Mills' lint problems are wrapped up *here!*

The Springs Cotton Mills' Grace Bleachery, Lancaster, S. C. Air-conditioning system designed and installed by Buensod-Stacey, Inc., Charlotte, N. C.

AAF Auto-AIRMAT filters provide lint-free air for Grace Bleachery

You won't find any "lint on the loose" at Spring Mills' Grace Bleachery in Lancaster, South Carolina. Automatic lint filters—AAF Auto-AIRMATS—are standing guard at eight air conditioning systems supplying 120,320 cfm of clean air.

Auto-AIRMAT is the *only* filter designed to remove lint fibres from the air and clean itself at the same time! Airmat filtering material, winding from roll at top of unit, moves automatically down the face of the filter, collecting lint all the way—rewinds into easily disposable roll at bottom.

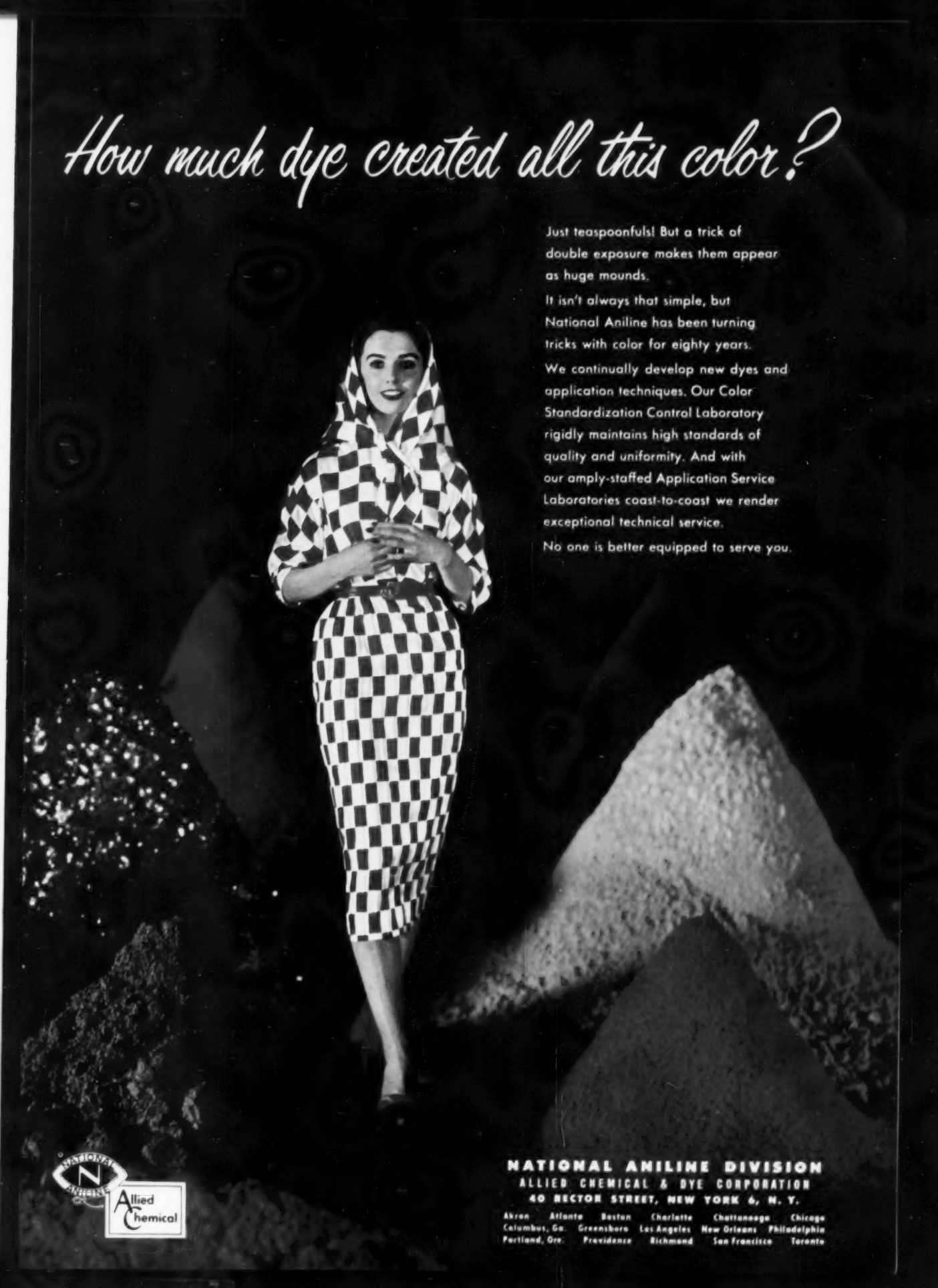
If you have a *lint problem,* get all the facts on the *lint filter* — AAF's Auto-AIRMAT. Call your AAF representative or write for Bulletin 234.

AAF American Air Filter COMPANY, INC.

275 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

AAF Filters and Precipitators
AAF Dust Control Equipment
BETTER AIR IS OUR BUSINESS
Herman Nelson Unit Heaters
Illinois Heating Specialties

How much dye created all this color?



Just teaspoonfuls! But a trick of double exposure makes them appear as huge mounds.

It isn't always that simple, but National Aniline has been turning tricks with color for eighty years.

We continually develop new dyes and application techniques. Our Color Standardization Control Laboratory rigidly maintains high standards of quality and uniformity. And with our amply-staffed Application Service Laboratories coast-to-coast we render exceptional technical service.

No one is better equipped to serve you.

National Aniline — Allied Chemical

NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

Akron Atlanta Boston Charlotte Chattanooga Chicago
Columbus, Ga. Greensboro Los Angeles New Orleans Philadelphia
Portland, Ore. Providence Richmond San Francisco Toronto

THE OLD BOSS DYER SAYS:

*In package dyeing, a well-planned and technically correct dyeing procedure can result in a bad dye job if the winding of the package is not done properly. Before blaming all of your troubles on the dyer or the dyeing equipment, check the preliminary processes.

* MORTON MACHINE WORKS, INC., brings you the Old Boss Dyer with a timely tip on dyeing each month.

MORTON also brings you the finest line of dyeing, bleaching and drying equipment available today—THE MORTON SYSTEM.

There's a MORTON SYSTEM installation near you . . . and our best selling point is a trip through a mill presently using MORTON equipment. May we hear from you?

MORTON MACHINE WORKS, Inc.

COLUMBUS, GEORGIA, U. S. A.

Manufacturers of the MORTON SYSTEM Machinery for Dyeing and Bleaching of:

BEAMS -:- PACKAGES -:- STOCK -:- PIECE -:- TOPS

VALVES — PUMPS — BEAM AND PACKAGE EXTRACTORS AND DRYERS — DYE BEAMS, ALL MAKES AND DESIGNS — DYE TUBES — DYE SPINDLES — TUBE SPACERS — STAINLESS STEEL DYE TUBES CUSTOM BUILT TANKS TO CUSTOMER'S SPECIFICATIONS.

For versatile performance wherever fine fabrics need the right treatment

. . . here's a trio of hard working Swift's Soaps. They fill the bill over a wide titer range to give sure, skilled and *experienced* wet finishing service. They're popular, preferred and on *command performance* for dyeing, fulling and scouring—because there's one to serve most every finishing need—regardless of water temperatures and other variables.

They are on immediate call from key-located Swift & Company plants and offices throughout the country. Write for details or for an economical trial order on these or other *Swift quality* soap or detergent products today: SWIFT & COMPANY Soap Department, 4115 Packers Ave., Chicago 9, Illinois.

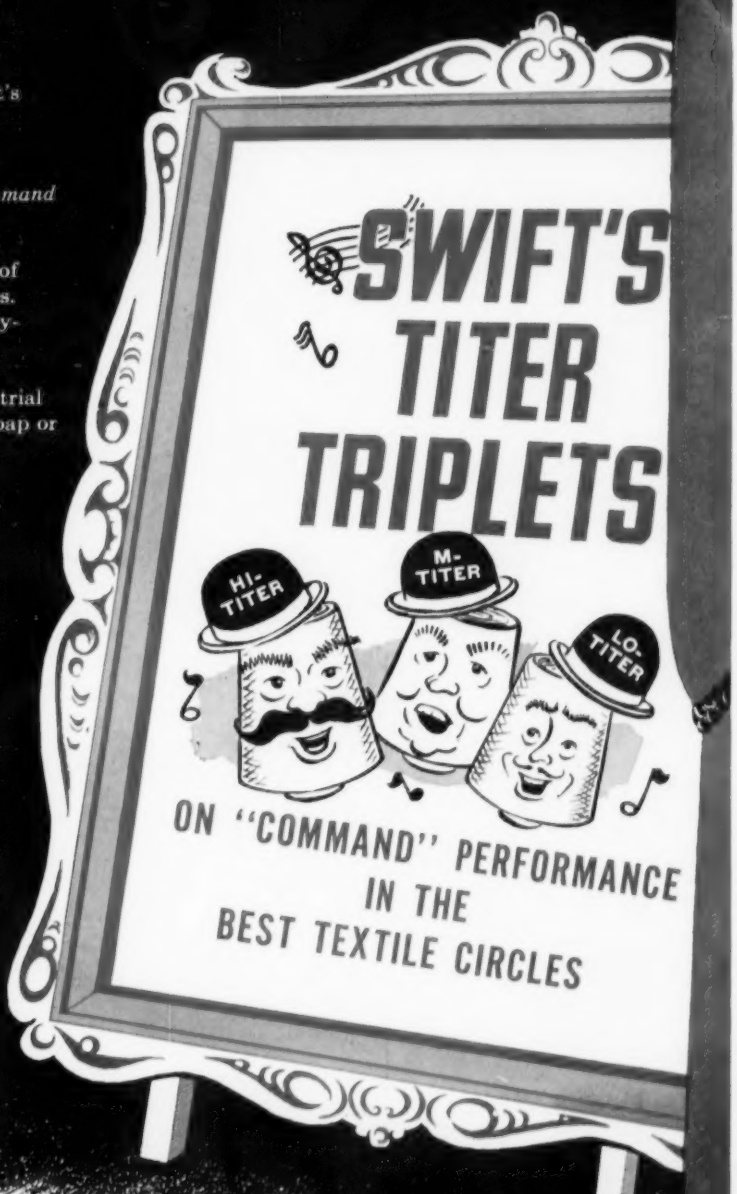
WHITE RIBBON CHIPS (41—42 C.) A neutral high titer, all-purpose soap particularly recommended for high temperature sudsing. For wool, cotton or synthetic processing. Powder—92% anhydrous soap. Flakes—88% anhydrous soap.

T-25 FLAKES (25—28 C.) Excellent for low titer fulling or for scouring fine or heavy worsteds. A neutral medium titer, red oil blended soap in flake form. Has 92% actual soap content.

VERTEX FLAKES (10—12 C.) Produced from highest grade red oil. Highly soluble in low temperature operations. Excellent for woolens. Provides good scouring at reduced steam costs. 94% actual soap content.

* * *

SWIFT'S SOLAR DETERGENTS are available in liquid or granule form. A wise choice for quick, uniform wetting or as a leveling agent in wool dye operations. 40% active anionic Sodium Alkylaryl Sulfonate.



Check your titer range

☐ White Ribbon Chips	41—42°C
☐ Mohawk Chips	39—40°C
☐ Wool Flakes	38—39°C
☐ Gold Medal Flakes	30—33°C
☐ T-25 Flakes	25—28°C
☐ Vertex Flakes	10—12°C

Swift
102 YEAR

To Serve Your Industry Better

See how you save with . . .

Tape that sticks on both sides!

"Scotch" Brand double-coated tapes save time and money on dozens of jobs throughout the mill.

They quickly, surely start winds of cloth on the roll. A strip of tape is placed lengthwise or around the empty tube. By pressing the end of the cloth against the tape, the wind is started. It's easy!

Taped tubes can be used many times before tape must be replaced.

You'll find many more ways to speed your production and cut waste in the free manual described below. Send for it today.

HOLD CLOTH to table for silk-screen printing with a "Scotch" Brand double-coated tape.

SECURE FELT or corduroy to race plates in the weaving department with double-coated tape.

SEND FOR free manual to Minnesota Mining and Manufacturing Company, Dept. OU-87, St. Paul 6, Minnesota.

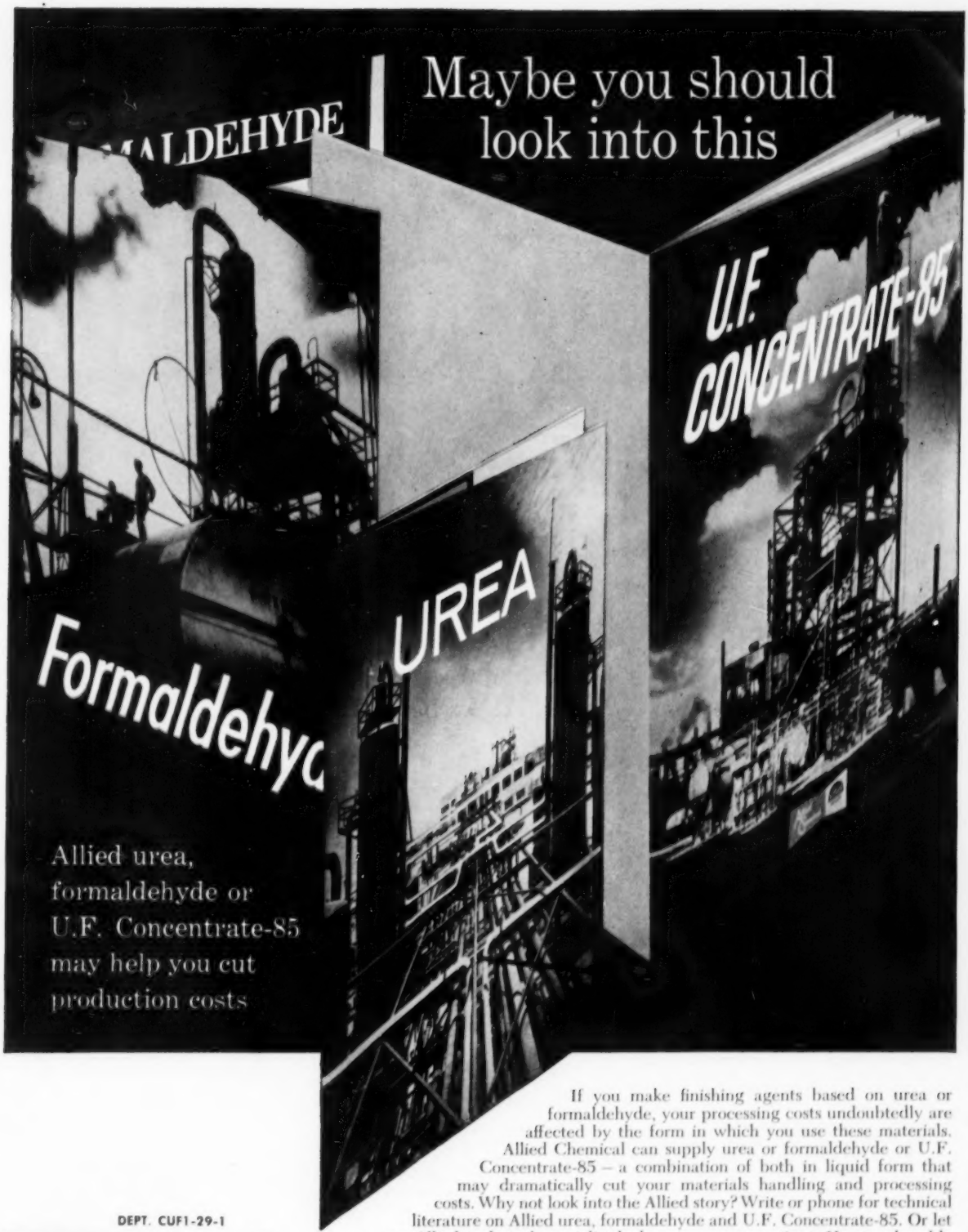
REG. U.S. PAT. OFF.

SCOTCH BRAND Pressure-Sensitive Tapes

FOR THE TEXTILE AND APPAREL INDUSTRIES

PRODUCT OF 3M COMPANY RESEARCH

The term "SCOTCH" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. Export Sales Office: 99 Park Ave., New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario. © 3M Co. 1957.



If you make finishing agents based on urea or formaldehyde, your processing costs undoubtedly are affected by the form in which you use these materials. Allied Chemical can supply urea or formaldehyde or U.F. Concentrate-85 — a combination of both in liquid form that may dramatically cut your materials handling and processing costs. Why not look into the Allied story? Write or phone for technical literature on Allied urea, formaldehyde and U.F. Concentrate-85. Or let an Allied technical specialist look over your operations. He may be able to suggest simple modifications that will reduce your resin-making costs.

DEPT. CUF1-29-1

Allied Chemical — NITROGEN DIVISION

40 Rector Street, New York 6, N. Y.

Ethanolamines • Ethylene Oxide • Ethylene Glycols • Urea • Formaldehyde • U. F. Concentrate—85 • Anhydrous Ammonia • Ammonia Liquor • Ammonium Sulfate • Sodium Nitrate • Methanol • Nitrogen Solutions • Nitrogen Tetroxide • Fertilizers & Feed Supplements

improve your sizing, printing, finishing . . .

with the Greatest of Ease

with

OK BRAND STARCHES and GUMS

There's a complete line of superior, quality controlled, OK BRAND textile starches and gums to help you get improved finishing, printing and sizing, reduce your costs, and assure you of consistent quality in your production.

You can enjoy all these benefits with the greatest of ease because better, more convenient systems for handling starches and gums have been developed by Hubinger textile experts. One of these trained, experienced textile technicians is near-by, prepared to help with any *special problems* you may have, too. For prompt attention to your needs without obligation, write, wire or phone:

IRA L. GRIFFIN & SONS
P. O. Box 10474
Charlotte, N. C.
(Phone: Franklin 6-5583)

CARL F. MERRITT
Box 346-A
Piedmont, S. C.
(Phone: Greenville 2-0424)

JOE R. MYERS
1817 Dell Drive
Columbus, Georgia
(Phone: Fairfax 7-2244)

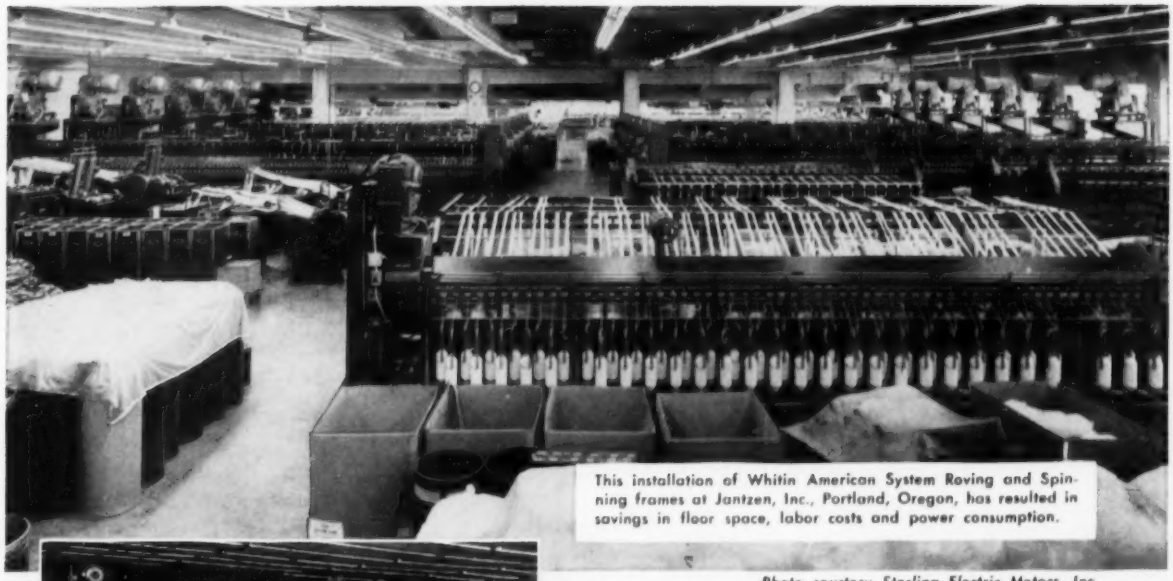
BOSTON OFFICE
192 State Street
Boston, Mass.
(Phone: Capitol 7-3268)

NEW YORK OFFICE
500 Fifth Avenue
New York 36, New York
(Phone: Longacre 5-4343)

The Hubinger Company

KEOKUK, IOWA

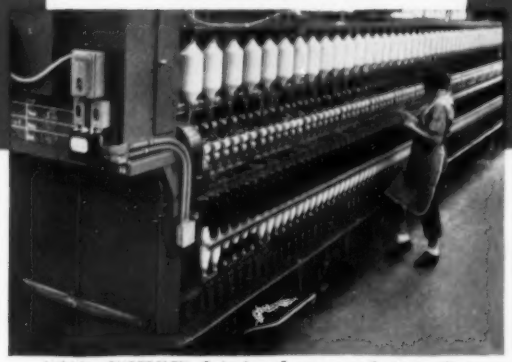
HUBINGER — 76 YEARS — QUALITY PRODUCTS FROM CORN



This installation of Whitin American System Roving and Spinning frames at Jantzen, Inc., Portland, Oregon, has resulted in savings in floor space, labor costs and power consumption.

Photo courtesy Sterling Electric Motors, Inc.

Whitin 10" x 5" QUIK-SET Roving frames at Jantzen, Inc.



Whitin SUPERFLEX Spinning frames at Jantzen, Inc.

Photos courtesy Jantzen, Inc.

Are you keeping machinery *that can't earn its "Keep"?*

...then you're losing the Profit Potential of WHITIN AMERICAN SYSTEM EQUIPMENT

The policy of harboring old out-dated equipment on the premise that it has a "few good years left in it" is dangerous! Regardless of how it may be *hidden* in the cost sheets, machinery that is not competitive is a liability!

Leaders in the industry — world-famous mills like Jantzen are quick to realize this. In the keenly competitive task of processing fibers for profit, they seek out the latest, most modern and most competitive equipment.

For production, quality, ease of maintenance and simplicity of operation, Whitin American System machinery — the ROTO-DRAFTER, the QUIK-SET Roving frame and the SUPERFLEX Spinning frame — offers unusual competitive advantages in the processing of worsted, synthetic and blended fibers.

To make your operation more profitable — make it Whitin!

The Jantzen Diving Girl — world famous symbol of quality on all Jantzen sportswear

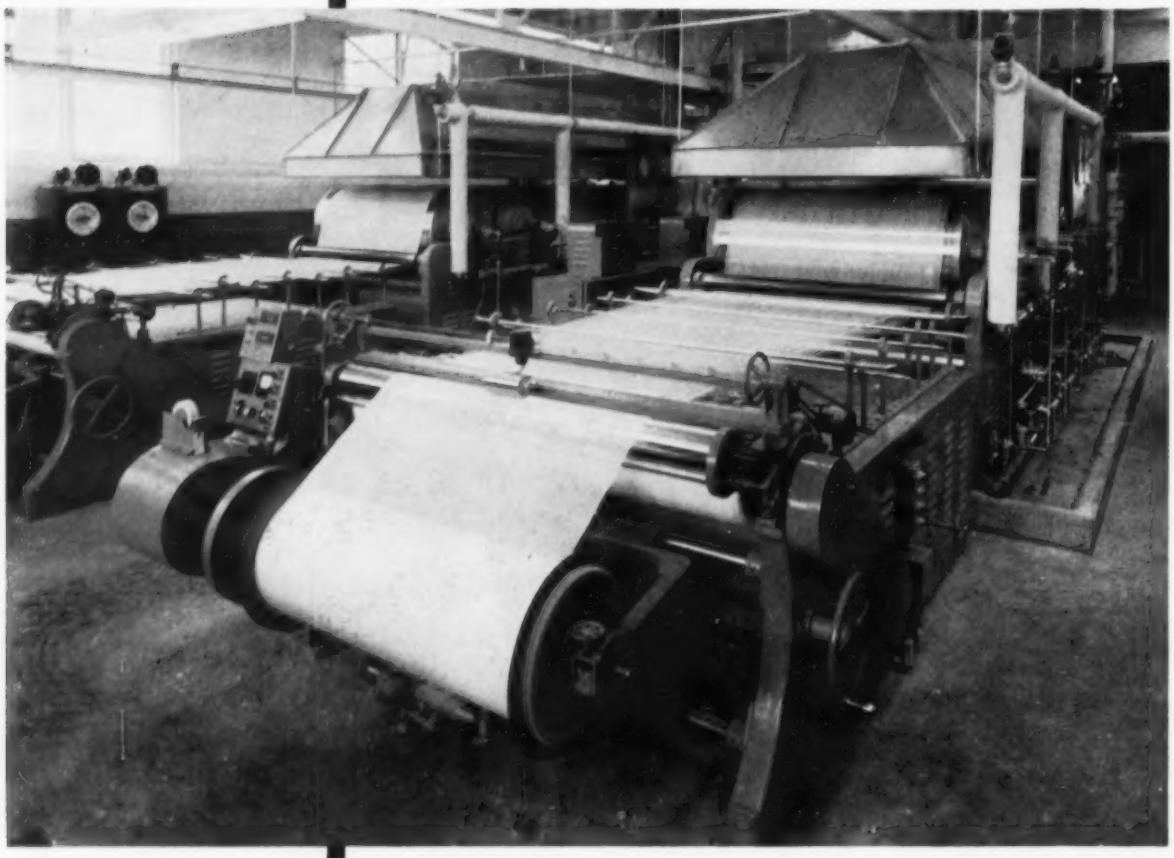
For complete information, ask your Whitin representative — or write direct to us.

Whitin MACHINE WORKS

WHITINSVILLE, MASS.

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

New installation at Glenwood Mills, Easley, S. C.
(Division of Mayfair Mills, Arcadia)



Another 100% Cocker Slasher Installation

With these two Cocker Slashers, Mayfair Mills joins the many other fine mills which rely 100% on Cocker Slashers. Perhaps the finest recommendation for Cocker Slashers and Service is the fact that one Cocker Slasher in a mill usually results in a complete Cocker installation.

Cocker Slashers have many outstanding advantages, such as complete and accurate push button controls over speed, tension, etc.—air operated rolls—full instrumentation—fast and simple beam doffing—and smooth operation at speeds up to 140 yards per minute. Mills report 20% to 25% more yarn on loom beams and production rates of over 1400 lbs. per hour.

Cocker Slashers will handle all types of yarns. Built with 5 to 13 cylinders up to 144" in width. Call on Cocker for complete information or engineering service.

New England & Canadian Representatives: J. S. Fallow & Co., 279 Union St., New Bedford, Mass. — 1215 Greene Ave., Montreal 6, Canada

THE LEADER AROUND THE WORLD

COCKER Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

ACID ALIZARINE BLUE B

Fast Mordant Blue B
Pr. 93

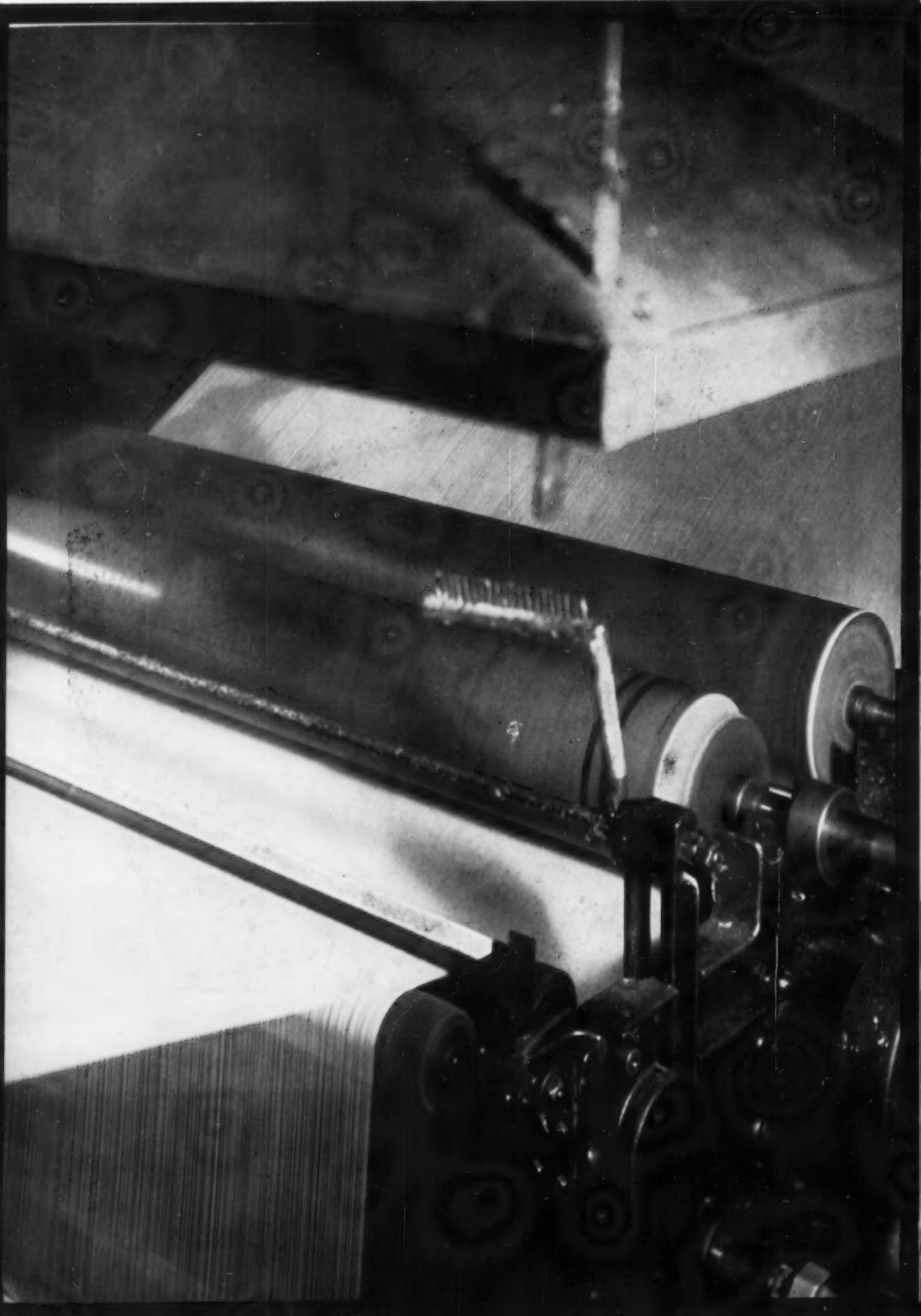
ACID ALIZARINE BLUE B is an acid mordant dyestuff producing full and bright Navy Blue shades, adapted for the dyeing of men's wear, uniforms and ladies' dress goods. Silk effects are left reserved.

In addition to its unexcelled light fastness, it is excellent to milling, washing, potting and decatizing. Due to its level dyeing properties, it is used extensively for the dyeing of piece goods.

HARSHAW

Reply to
ZINSSER & COMPANY, INC.
Hastings-On-Hudson 6, N.Y.

Subsidiary of
THE HARSHAW CHEMICAL CO.
Cleveland 6, Ohio



Why Dayco Slasher Rolls

give faster, lower cost slashing

Mill after mill has increased slashing speeds, reduced costs and produced more uniformly sized warp yarns by using Dayco Thoro-Size Slasher Rolls in *both* front and back roll positions.

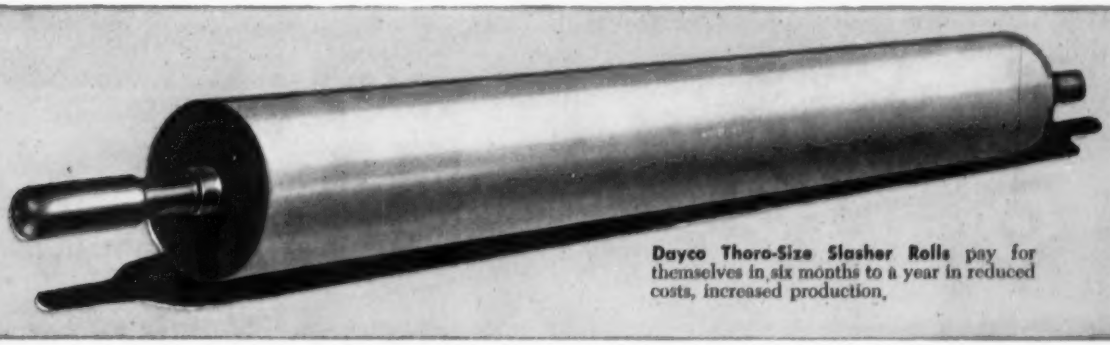
In test after actual test, Dayco Rolls proved they give more even size pick-up. That's because they're available in a finish to meet your exact sizing requirements.

Dayco Rolls meter size more accurately because they have the finish you need plus the "perfect cushion" provided by special synthetic Dayco compounds.

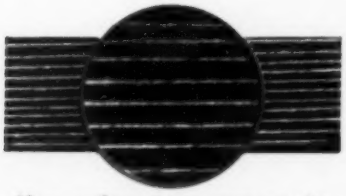
These two factors—improved size pick-up, and control of size within desired limits—permit most mills to increase slasher speeds remarkably . . . some as much as 40-45%.

Most important, Dayco Slasher Rolls eliminate the material costs, slasher downtime and labor required to maintain blankets. In addition, more precise metering of size results in considerable savings in starch costs. And, Dayco Slasher Rolls pay for themselves in reduced costs within six months to a year.

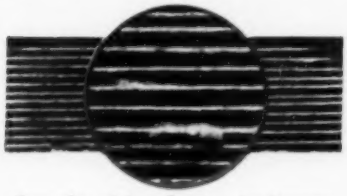
The result of more than eleven years of research, Dayco Thoro-Size Slasher Rolls are unaffected by oils or chemicals, retain their resiliency for long periods of time, and can be easily resurfaced for double and triple service life.



Dayco Thoro-Size Slasher Rolls pay for themselves in six months to a year in reduced costs, increased production.



Clean, uniform sizing proves superior performance of Dayco slasher rolls



Irregular sizing denotes inadequate control of ordinary slasher rolls

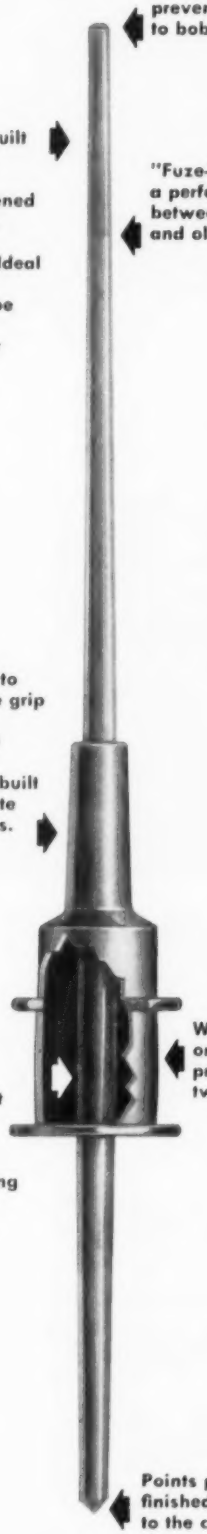
Your Dayco representative will stop in to see you soon. Ask him for details on how Dayco Thoro-Size Slasher Rolls can help you step up slasher speeds, get more uniform yarn and cut maintenance costs. Or write The Dayton Rubber Co., Textile Division, 401 S. C. National Bank Building, Greenville, South Carolina.

© D.R. 1957

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

FOR WARPS THAT WEAVE BETTER
...SIZE WITH PENFORD GUMS
Penford Gums are being used with phenomenal success for warp sizing combed cotton, viscose, worsted, Nylon, Dacron, Acrilan, Orlon, Dynel, staple fibers and blends. They provide excellent weaving protection by increasing abrasion resistance and fiber bonding.
There is a Penford Gum for every warp sizing requirement, and Penick & Ford Technical Sales Service Engineers will gladly assist you by recommending the Gum best suited for your application.
Penford Gums*
PENICK & FORD, LTD.
INCORPORATED
420 LEXINGTON AVE., NEW YORK 17, N. Y. · 1531 MARIETTA BLVD., ATLANTA, GA.
CEDAR RAPIDS, IOWA · 18 CALIFORNIA STREET, SAN FRANCISCO 11, CALIFORNIA
MANUFACTURER OF DOUGLAS PEARL • CROWN THIN BOILING • DOUGLAS DEXTRINES • CLEARSOL GUMS FOR THE TEXTILE INDUSTRY
• (U. S. PATENT NOS. 2,516,632; 2,516,633; 2,516,634)


Tips are rounded to prevent damage to bobbins.
Worn tops rebuilt by exclusive "Specialloy" process, hardened and reground. Or new tops added by the Ideal "Fuze-Weld" process. Can be lengthened to produce larger packages.
"Fuze-Weld" forms a perfect bond between new top and old blade.
Acorns rebuilt to assure positive grip and fit, and uniform height of bobbins. Can also be rebuilt to accommodate larger packages.
Whorls rebuilt or resized to produce uniform twist and count.
Worn bearing surfaces rebuilt with tough, oil-retaining "Specialloy": prevents running dry and gives longer wear.
Points precision finished ground to the correct degree of taper.

ADAPTOR SPINDLES
Ideal puts on aluminum adaptors and can rebuild bottom of blades to original or to new lengths.

Ideal

is headquarters for spindle savings

spinning • twisting • throwing

Ideal *rebuilds* (not just regrinds or repairs) your worn spindles. Ideal rebuilt spindles give you new spindle efficiency and length of service at very substantial savings. All work is done to precision tolerances.

Three Services

Rebuilt to original specifications.

Rebuilt to produce larger packages.

New spindles of all types, manufactured to specifications.

If your bobbins vibrate or weave, or are not all at the same height, they are causing poor lay and are wearing out bolsters and bobbins. Let an Ideal technical representative survey your frames and give you a price on your work without obligation.

Ideal Machine Shops, Inc.

Bessemer City, North Carolina

Continuous Service to Textile Mills Since 1925

Looking for Trouble?

In Weaving and Winding it *pays* to go looking for trouble — right where it starts. With production stopped and machines idle it's sometimes hard to spot faulty operation. Detection is even harder with machines running at high speed — except when you go looking with a Strobotac®.

Strobotac® lets you *see* misalignments and worn or poor-fitting parts. Spindle speeds can be compared for exact uniformity — fast-moving parts can be observed in slow motion or "stopped" completely — all while production continues at full speed.

Strobotac® will pay for itself many times over in improved quality, better production and easier maintenance. Write for Stroboscope Literature for the Textile Industry.

Type 631-BL Strobotac $160

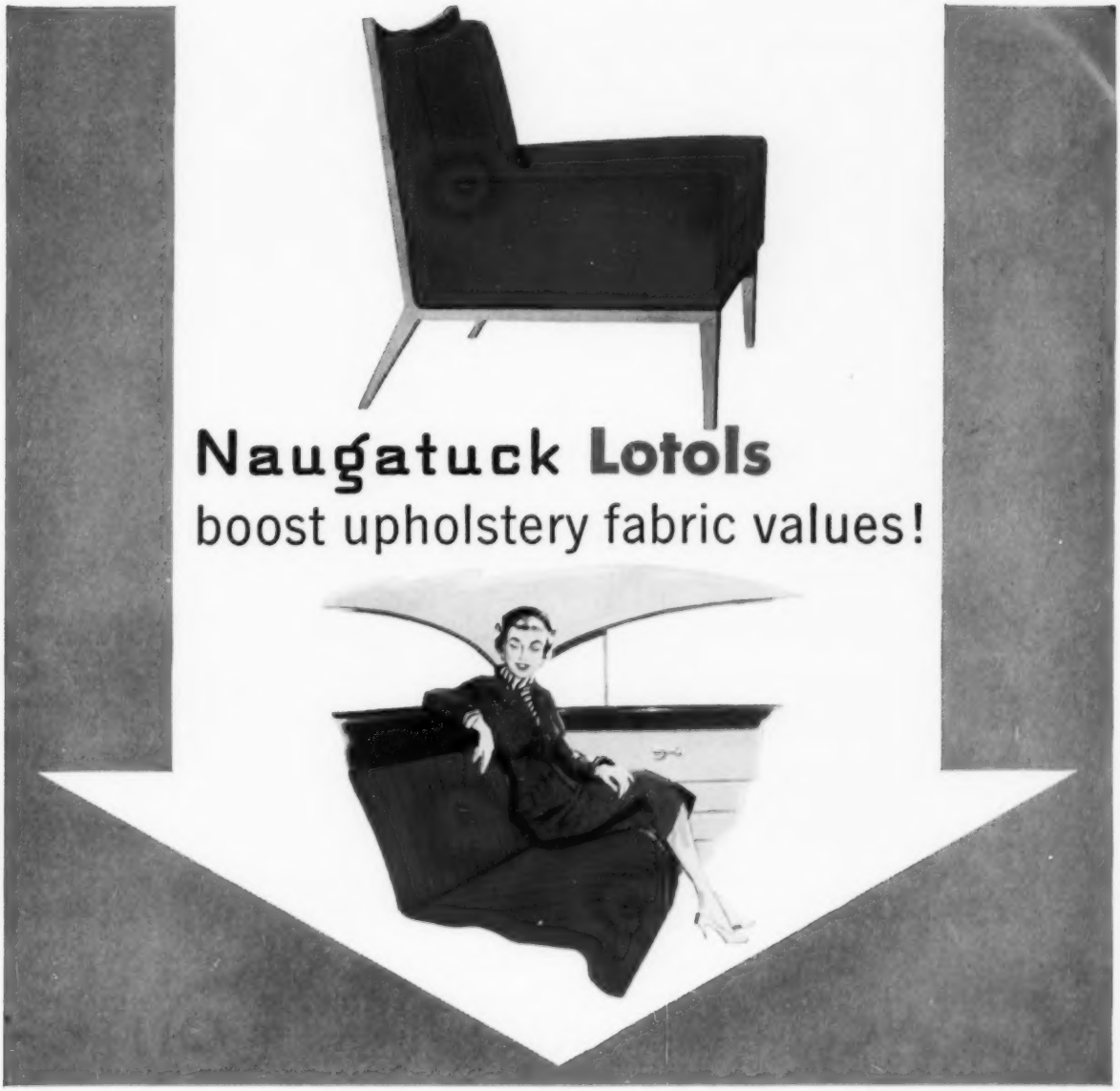
Provides accurately-spaced, repetitive light flashes for slow-motion studies over a range of 300 to 100,000 rpm; direct-reading range is 60 to 14,400 rpm.

Compact, simple-to-use, completely self contained, operates from common 115-volt 60-cycle power lines.

STROBOTAC®

Manufactured exclusively by

GENERAL RADIO Company, 275 Massachusetts Ave., Cambridge 39, Mass.



Naugatuck Lotols
boost upholstery fabric values!

BACK-SIZING modern upholstery fabrics with just the *right* formulation of rubber or rubber-and-plastic latex adds value to the fabric out of all proportion to its meager cost. Specifically, it—

- **Anchors the weave, twist or pile**
- **Eliminates raveling of cut edges**
- **Improves body and hand**
- **Minimizes water spotting**
- **Prolongs wear**
- **Maintains dimensional stability**

Leading upholstery manufacturers depend on Naugatuck's tailored-to-order latex compounds to give their fabrics added value, aesthetically as well as physically!

Such a latex, custom-compounded in ready-to-use form by Naugatuck, is sold under the trade name LOTOL. And behind every LOTOL® is the know-how that belongs to the world's leading latex producer and compounder, plus the facilities of *three* modern compounding plants strategically located at Gastonia, Naugatuck and Los Angeles to save you shipping time and expense.

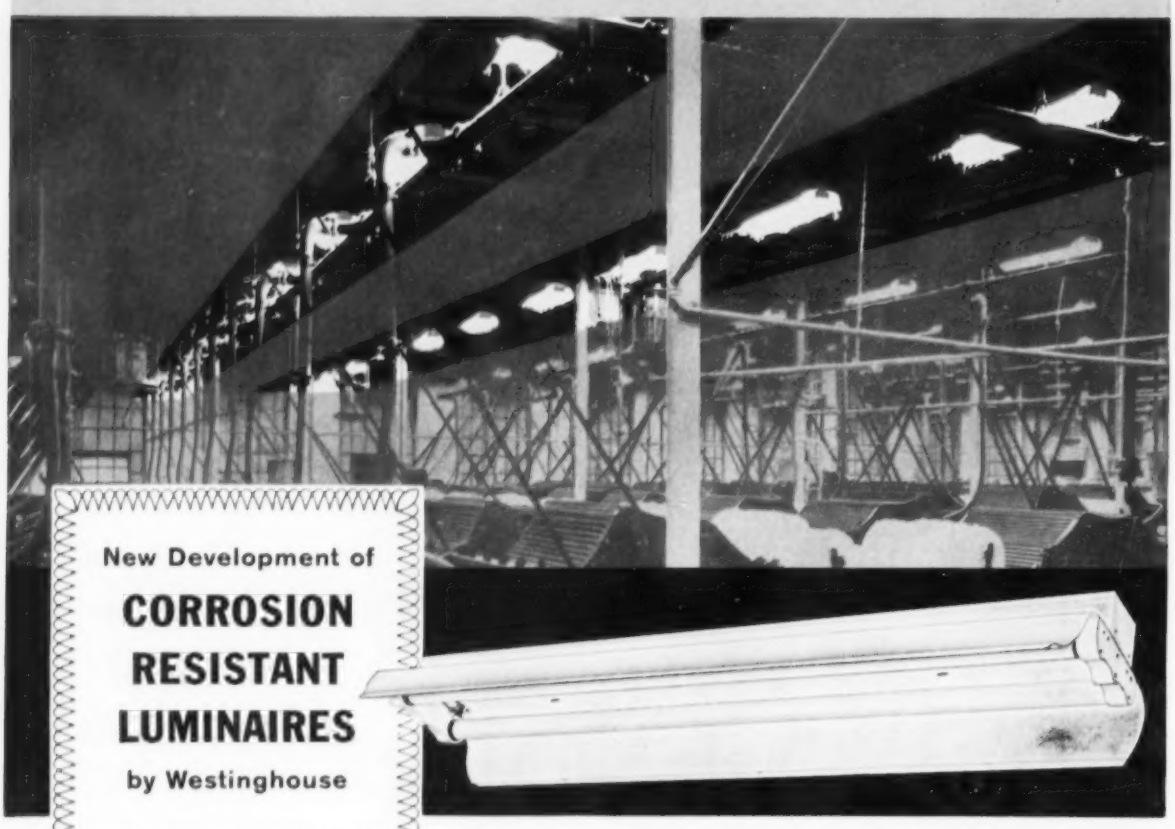
United States Rubber

Naugatuck Chemical Division

Naugatuck, Connecticut

BRANCHES: Akron • Boston • Chicago • Memphis • New York • Phila. • Mfg.: Los Angeles • Gastonia • Naugatuck • CANADA: Naugatuck Chemicals, Elmira, Ont.
Rubber Chemicals • Synthetic Rubber • Plastics • Agricultural Chemicals • Reclaimed Rubber • Latices • Cable Address: Rubexport, N. Y.

Every Plant has some areas where
CORROSIVE ATMOSPHERE CREATES CRITICAL HAZARDS LIKE THESE!



New Development of

CORROSION RESISTANT LUMINAIRES

by Westinghouse

CUTS LUMINAIRE REPLACEMENT COSTS UP TO 75%

Luminaire fabrication with stainless steel—brass and porcelain enamel—proves far more immune to vapors — fumes! Outlasts conventional fixtures 3, 4 and 5 times!

Astonishing numbers of plants today sustain corrosive atmospheres, that are *devastating* to ordinary luminaires! Authorities say there is erosive contamination — excessive corrosive steam — virulent moisture in the air of *virtually every* modern manufacturing operation!

These conditions, they say . . . *"Ravage* materials usually used in making most, common, industrial luminaires . . . resulting in *exorbitant* luminaire replacements costs! — or, the constant threat of short circuits . . . the costliness of corroded substance dripping into product-in-process . . . *even the threat of entire luminaires dropping into machinery—onto workers themselves!"*

In order to help avoid this, Westinghouse has now developed CORROSION-RESISTANT LUMINAIRES — end-plates of nickel-plated brass, stainless steel hardware, porcelain-enameled channels and reflectors, heavy-duty, brass-enclosed lamp-holders—with *all* components as *corrosion-free* as modern metals permit! These materials withstand *severest* corrosive atmospheres. They create luminaires outlasting conventional units 3 to 5 times! And frequently cut replacement costs *up to as much as 75%!*

Your Westinghouse Lighting Specialist is thoroughly prepared to survey *your* plant situation — to recommend *squarely* whether or not *your* operation would benefit from CORROSION-RESISTANT LUMINAIRES. Call him *today*! You *may* benefit *tremendously!*

J-04413

YOU CAN BE SURE...IF IT'S

Westinghouse

Certified Lighting

Charles Timmons, Gulf Sales Engineer, and C. A. Harris, General Overseer of this leading textile mill, checking some of the 23,400 spindles running on Gulfspin. This plant is "100% Gulf" . . . depends on Gulf products for every lubricating job!

At a prominent South Carolina Mill—

23,400 twister spindles . . . no lubrication trouble in 5 years . . . with GULFSPIN!

That's quite a performance . . . twisters with a total of 23,400 spindles functioning perfectly for 5 years with no lubrication trouble at all! The oil: Gulfspin.

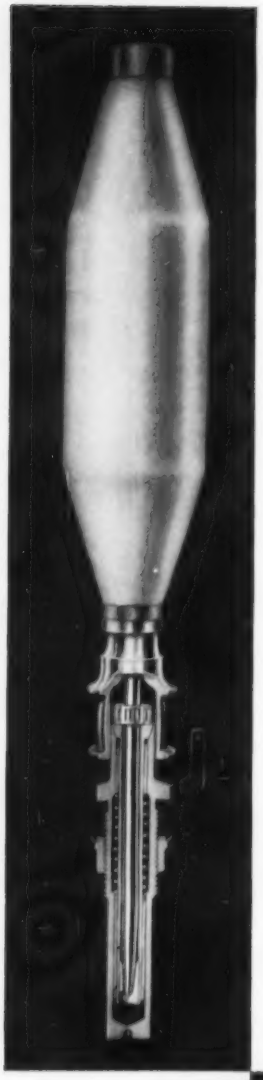
As Mr. C. A. Harris, General Overseer, says: "Gulfspin does a fine job . . . we've used it for 5 years, and like it!" Gulfspin contributes to smooth operation and reduced maintenance costs. It's an outstanding spindle oil, specially designed to keep contaminants from building up in the spindle bases. Gulfspin also protects against rust and excessive wear —and helps cut down on starting torque.

Mr. Harris sees that oil is changed every 6 months, but he tells us that Gulfspin is still clear, even after that length of service! If *you'd* like to do away with sludge, rust, sticking spindles, call your Gulf Sales Engineer . . . at your nearest Gulf office.

Gulf Oil Corporation
1822 Gulf Building
Pittsburgh 30, Pa.

GULF

THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS



no substitutes wanted for...

Forty Million Spindles equipped with SKF Roller Bearings

More than 40 million SKF anti-friction spindles are now serving textile mills throughout the world. And in the 30 years since their introduction, most mill men have respecified them for new additions to spinning and twisting frame installations.

NO SUBSTITUTES WANTED!! This isn't a mere sentimental preference but one that has resulted from well calculated, business thinking about the superior yarn being produced at a minimum cost per pound.

SKF Roller Bearing Spindles are available in several sizes and types of bolsters, assuring mills of the right size bearing for most applications. More of these spindles have been installed recently than ever before—in fact, there are more in operation today than all other makes of anti-friction bearing spindles combined.

There are no substitutes for proven performance—other manufacturers may imitate its appearance—but the exclusive internal design and precision tolerances are found only in the original.

Specify SKF—the only anti-friction bearing bolster that has served the industry for over a quarter of a century.

7716

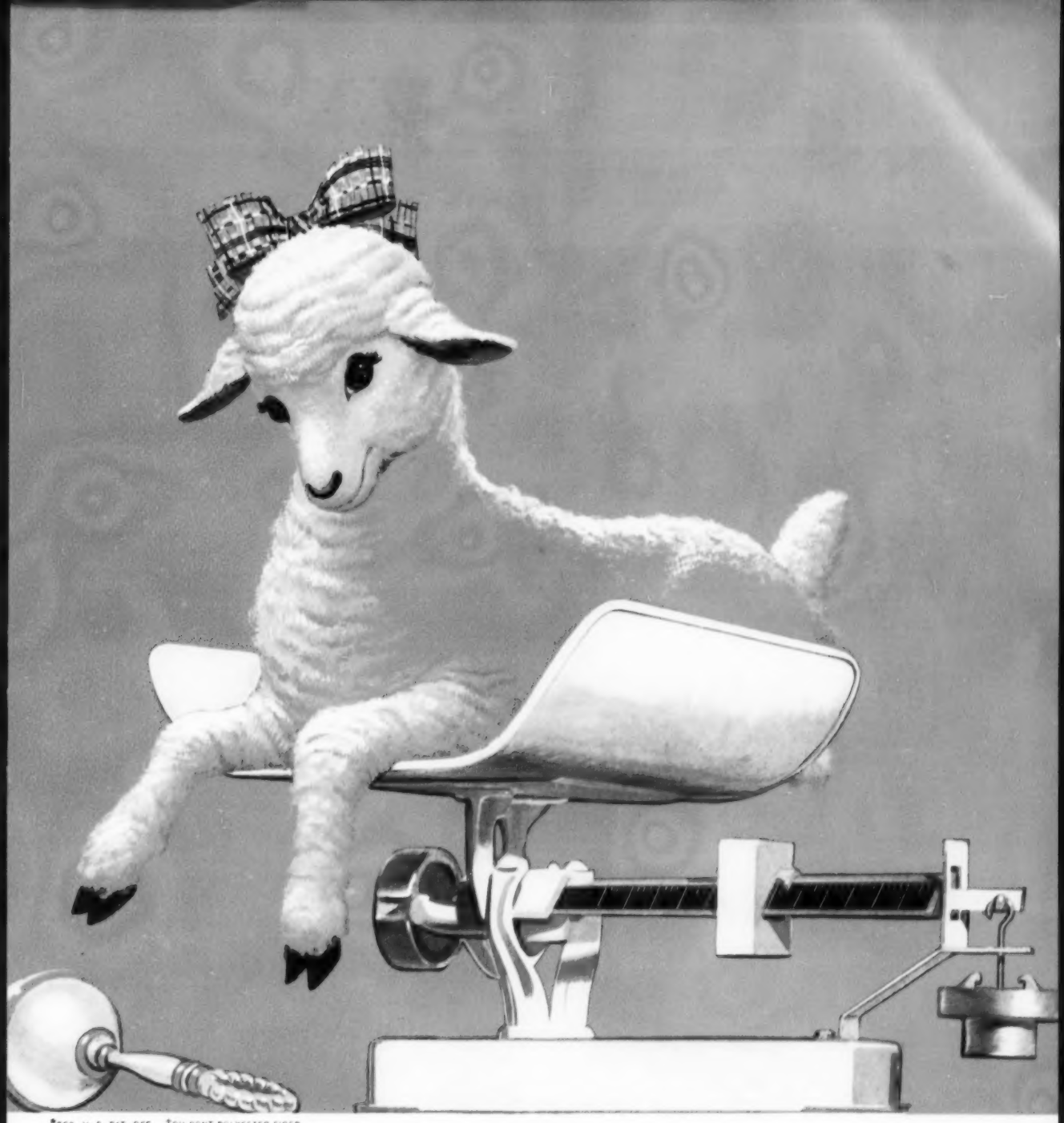
SKF®

TEXTILE BEARING SPECIALTIES

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of SKF and HESS-BRIGHT® bearings.

SUBSIDIARY

TYSON BEARING CORPORATION, MASSILLON, OHIO
—manufacturers of Tyson tapered roller bearings.



*REG. U. S. PAT. OFF. †DU PONT POLYESTER FIBER

Quality colors for pedigreed woolens!

AMACID* and CHROMAVEN* Dyes

Two great dye groups worthy of your finest woolens and blends with Nylon and †Dacron. Available in a rainbow range of colors for all consumer shade demands. Excellent fastness to sunlight, perspiration, dry cleaning. Easy application by all wool-dyeing methods. Ideal for suitings, overcoatings, wool jersey dresses, upholstery yarns. For expert help with any wool-dyeing problem, write or call your A. A. P. representative at our nearest branch.

AAP

AMERICAN ANILINE PRODUCTS

A UNIT OF KOPPERS CO., INC.

KOPPERS BUILDING, PITTSBURGH 19, PA. **PLANT:** LOCK HAVEN, PA. **BRANCHES:** Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. • Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. • Columbus, Ga. • Los Angeles, Cal. **Dominion Anilines & Chemicals, Ltd.,** Toronto, Canada • Montreal, Canada

If you progress with the times, you must realize that the advantage of new machinery is judged today by the results it produces in the way of better quality at lower cost . . .

3 WAY SCRAY a space saver in a cotton finishing range

for cotton and synthetic goods

M-125 SHEAR

new brushing efficiency for cotton gray goods

M-125 BRUSHER

. . . rather than just a gross return on your investment. To help you better your competitive position in your cloth room is the endeavor of our development men who are ready and qualified to serve you.

CLOTH INSPECTOR with vertical light box for cottons and spun rayons

CURTIS & MARBLE MACHINE CO.

72 CAMBRIDGE STREET • WORCESTER 3 • MASSACHUSETTS

SOUTHERN SALES & SERVICE SOUTH CAROLINA NATIONAL BANK BUILDING, GREENVILLE, S.C.

News IN BRIEF

Rayon Mills to Pay Cotton Support Costs? Under a cotton price support bill introduced by Senator Russell (D., Ga.), and Representative Whitten (D., Miss.), cotton would be sold at world prices and farmers could grow all they wanted. However, quotas would be set, and farmers would receive certificates based on their quotas. Cotton mills would have to buy these certificates for each pound of cotton used, and mills using synthetic fibers "similar to cotton" would have to buy certificates for every pound of synthetic fiber used. This would presumably force the price of rayon up to that of cotton. Under the bill, importers would be required to buy certificates covering the cotton or synthetic fiber in imported fabrics.

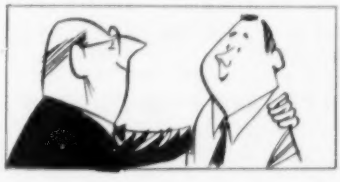
Textiles Looking Up. "There is nothing that cheers me up quite as much as orders for cloth and yarn, and right now I am feeling pretty cheerful. . . . The summer is normally a dull time with our industry, but the number of orders which have come in during the past few weeks have even made me hopeful that we have had our dull period and that the coming months will find us very busy.—*J. Craig Smith, president Avondale Mills, in* "The Avondale Sun."

U. S. Textiles Swamp Canada. A "spectacular" increase in the volume of U. S. textiles imported into Canada since 1939 is viewed with alarm by the Primary Textiles Institute. In 1939, textile imports from the U. S. totaled $15.5 million; by 1955 they had reached a value of $114 million. One reason for the increase, according

to the Institute, is the tendency of the U. S. textile industry to dump in Canada below cost. The Institute calls for a revision of Canadian customs regulations, to base the value of U. S. imports on actual costs of production, rather than on distress prices on the U. S. market.

Free Beer and Bagels. The New York State Labor Department reports the following interesting provisions in labor contracts recently signed in the Empire State: a worker's birthday to be a paid holiday for him, free beer (for brewery workers), free bagels (for bakery employees), full pay while on jury duty, and time off with pay to attend technical or professional conferences.

Satisfying Salaried Employees. The National Association of Manufacturers has issued a study, "Satisfying the Salaried Employee," which it describes as a practical manual for building better relations with all categories of white-collar people. The study covers four key areas which hold the answers to job satisfaction in the office and the laboratory: status and recognition, compensation, communication, and supervision. Copies of the 64-page booklet are available at 50¢ per copy from NAM, at 2 East 48th St., New York 17, N. Y.



Cotton Researchers to Use Cobalt 60. The Southern Utilization Research and Development Division of the U. S. Department of Agriculture has received a supply of radioactive cobalt (cobalt 60) for use in cotton research. It is expected to provide a faster and more accurate means of determining how various modifications affect the chemical reactivity and physical properties of cotton. It will also be used to measure the absorption and adhesion of dyestuffs, and to obtain other information about the behavior of cotton.

Rayon First in Tufteds. Tufted textiles used 88,332,000 pounds of rayon in 1956—51 per cent of all fibers used by that segment of the industry—according to a report by *Textile Organon*. Rayon, which had less than 2 per cent of the market in 1951, thus displaced cotton as the major fiber used in tufteds.

Canadian Textile Conference. Most of Canada's textile associations and textile schools have

Are Your Key Men...

stuck on one job at a time

NOT IF YOU OPERATE A **Beechcraft** *Industrial Airplane*

For descriptive brochure write or phone

Southern Airways Company

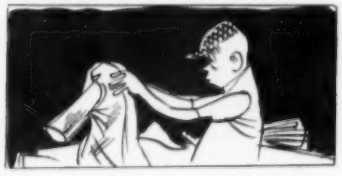
ATLANTA, GEORGIA, TEL. POPLAR 7-8918

Charlotte, N. C., Tel. FRranklin 6-7150 Birmingham, Ala., Tel. 4-0502

Beechcraft airfleet of the textile industry

joined hands to sponsor a Canadian Textile Conference, to be held at the Queen Elizabeth Hotel, Montreal, on May 6-8, 1958.

Dyes Damage Car Coats. Numerous complaints from drycleaners concerning car coats that develop stains from fugitive dyes used in their interlinings are reported by the National Institute of Drycleaning.



The offending interlinings were found to be made of shoddy, with cotton and rayon fibers mixed in with the reclaimed wool. Any wetting in use or in drycleaning causes the fugitive dyes in the interlining to bleed through to the outer fabric.

No Effect from Wetting Agents in Harvesting. Use of wetting agents in the harvesting of cotton with spindle pickers does not appear to have any appreciable effect on moisture regain during subsequent handling, according to researchers at the U. S. Department of Agriculture's Southern Utilization Research and Development Division.

IFCATI Consultant to UN. The International Federation of Cotton and Allied Textile Industries has been granted consultative status with the Economic and Social Council of the United Nations. This step institutes permanent liaison and consultation between the Council and the Federation regarding international economic affairs pertaining to cotton and allied textiles.

Summer Courses at MIT. Special one-week summer programs at Massachusetts Institute of Technology include "Disposal of Industrial Wastes from the Textile Industry," Aug. 19-23; "Textile Manufacturing Principles," Aug. 5-9; and "Impact Behavior of Textile Materials," July 29-Aug. 2. Details and application blanks may be obtained from Office of the Summer Session, Room 7-103, Massachusetts Institute of Technology, Cambridge 39, Mass.

Japan to Make Acrylic Fiber. A company to manufacture acrylic fiber in Japan has been formed jointly by Chemstrand Corp., U.S.A., and Mitsubishi Rayon Co., Ltd., Japan. The brand name of the fiber has not been announced, but "Acrilan," Chemstrand's trade mark, will not be used. Production is expected to start in 1959, with an initial output of 7,500,000 pounds per year.

ACMA Becomes ATMA. Membership of the Alabama Cotton Manufacturers Association has approved change of the organization's name to the Alabama Textile Manufacturers Association. Mills representing 1,673,436 spindles approved the change, while mills with 46,640 spindles were opposed.

Senate Wool Exhibit Postponed. Wool Manufacturers Council of the Northern Textile Association has postponed its exhibit in the Senate Office Building until early next year, because of Congress' drive for early adjournment, presidential invocation of the Geneva Reservation wool tariff quota, and advice from New England senators. 1958 will be an important year for wool, because of expiration of trade agreements legislation in June.

News in Brief

Electrical Conference at N. C. State. The sixth annual conference on electrical applications for the textile industry, jointly sponsored

by the American Institute of Electrical Engineers and N. C. State College, will be held at the Riddick Laboratory Auditorium, Raleigh, N. C., Nov. 14-15. The program includes an open-forum discussion,

Women's Attitudes on Nylon Hosiery

The Textile Fibers Department of the Du Pont Co. recently engaged National Analysts to conduct a survey among American women to determine their attitudes concerning the wearing of hosiery.

Some of the key findings:

1. The social pressure to wear hosiery is declining. At one time it was considered unrefined, in poor taste, or even a little bit immoral not to wear hosiery, but this social code is waning. The "bare-legged attitude" is more common among younger women than older.

2. Women feel that the sexual significance of their legs is declining. Women formerly thought that men first noticed their legs; now men first notice the bust. Significance to the merchandising department: Re-establish leg consciousness to up hosiery sales.

3. Hosiery is an important symbol of growing up among young girls.

4. In some ways women like the idea of wearing colored hosiery (meaning any color other than the usual tan or beige), but in other ways they fear and dislike the idea. Women believe that the legs should look "natural," but colored hosiery gives more opportunity for exhibiting individuality. Colored hosiery has a "theatrical" taint.

5. Women are confused about the meaning of gauge and denier.

6. There are as many elaborate theories about how to wash, store, and care for nylon hosiery as there are about how to get rid of colds or remove warts.

Abstract of an address given by D. M. Colyer, supervisor, consumer research, merchandising division, Textile Fibers Department, Du Pont Co., at the Association of National Advertisers workshop on advertising research.

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

BUSINESS ESTABLISHED 1840

●

L. F. Dommerich & Co. California Corp.

819 Santee St., Los Angeles

Trinity — 7171

Looms in Place in Broad Woven Fabric Mills, December 31, 1956 and 1955

Type of loom	Number in place, December 31	
	1956	1955
TOTAL	482,196	497,492
Cotton and man-made fiber looms	461,784	475,523
Single shuttle-cam looms	318,970	326,545
Single shuttle-dobby looms	78,336	81,371
Multiple shuttle (box)-cam or dobby looms	50,721	54,375
Single or multiple shuttle (box)-pile and Jacquard looms	13,757	13,232
Woolen and worsted looms	20,412	21,969
Pile and Jacquard looms	1,099	1,015
All other automatic looms, including weaving machines	17,154	18,598
All other non-automatic looms, except narrow looms	2,159	2,356

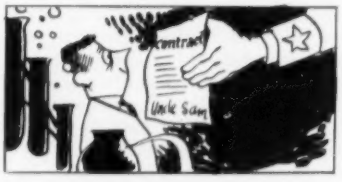
Source: Bureau of the Census, Industry Division, Textile Branch.

"What's New in Textile Electrical Equipment."

More Yarn Variety Needed. Yarn spinners must be more flexible in their thinking and more diversified in their production to meet the challenge of today's competition, according to Albert O. Silverman of Commercial Factors Corp. Stressing the importance of having spinning and twisting machinery equipped to make the widest possible variety of blends and effects, he listed the following as new yarns that are in demand: spun synthetics, twisted with linen for knitwear, drapery, and other home furnishing fabrics; and natural mohair loops, combined with solution-dyed spun yarns. There is nothing wrong with the yarn business that can't be cured through the use of "more imagination, and more work with fabric stylists and technicians," said Mr. Silverman.

Bale Covering Progress Report. The National Cotton Council announces plans for covering about 10,000 bales of the 1957 cotton crop with a 12-ounce burlap fabric laminated with a ¾- to 1-mill plastic film, with perforations in the film of various sizes and spacings. Knitted paper coverings, first tried in 1956, will be tried on a larger scale. The Council notes that development and adoption of a new bale cover will not entirely solve the packaging problem; questions of sampling practices, net-weight trading, and moisture transfer to and from the bale will still remain to be answered.

New TRI Cotton Research. Textile Research Institute has been awarded a two-year research contract by the U. S. Department of Agriculture for a study of cotton



fiber extensibility and its practical significance. The relationship of extensibility to the molecular structure of the fiber and its translation to yarn properties will be investigated.

New Wool Contract. A new contract for the future delivery of wool tops has been voted by the Wool Associates of the New York Cotton Exchange, beginning with contracts for delivery in October 1958. The new contract calls for a maximum of 1¾ per cent and a minimum of 1 per cent oil and natural fat content, and an increase of about 0.15 inch in each

News in Brief

of the Exchange's staple classification categories.

Germany Leads in Wage Growth. Real wages in the Federal Republic of Germany increased by 35 per cent from 1950 to mid-1956, according to a report by the Ger-

man-American Trade Promotion Office. This compared with a 20 per cent increase in the U. S., 32 per cent in France, 30 per cent in Sweden, and 11 per cent in England.

Lowell Tech News. An undergraduate course in nuclear engineering has been established at Lowell Technological Institute, starting with the fall semester. The four-year course will lead to a B.S. degree. * * * Ground has been broken for a $2,108,000 Industrial Research Building. Occupancy is scheduled for September 1958.

Expand Import Data. The U. S. Department of Commerce is now publishing more detailed monthly statistics on imports of cotton textiles as a result of Japan's self-imposed quota system. The entire range of yarn, fabric, woven and knit garments, and household goods is covered.

Cotton to Skid? King Cotton's slump is the result of 25 years of unsound price support legislation, according to Joseph P. Hennican, Jr., president of the New Orleans Cotton Exchange. He reports that

cotton men predict that eight and three-quarter million bales of cot-

Using Salt Efficiently

by **INTERNATIONAL SALT COMPANY, INC.**—America's largest producer of salt

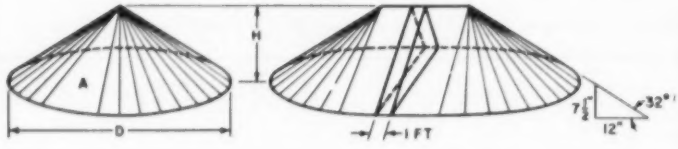
How to Determine Space Needs for Rock Salt Storage

Today, salt-using companies often have the problem of determining how much area and volume are needed to store a given amount of rock salt. To help the companies faced with this situation, International has developed a system for determining the exact floor space (or plant area) needed for any tonnage of salt. In addition, it is possible with this system to select the shape of salt pile best suited to individual plant layouts.

Principles of salt storage. International's system is based on two known facts: first, one cubic foot of rock salt (loosely poured and medium-packed) contains a constant average of 72 lbs. of salt. And, second, every conical pile formed by pouring rock salt from a fixed overhead point assumes the same shape.

Referring to the diagram, you will note that this shape is a perfectly conical one, with an angle of repose of 32° from the horizontal. In other words, for every 12-inch horizontal run, there is a 7⅝-inch rise. With these basic principles, therefore, it is possible to determine just how large a pile will be formed by any tonnage of rock salt.

Tables give complete area and volume data. For the convenience of salt-using companies, International has prepared a comprehensive set of tables with all the storage-space data for amounts of salt ranging from three to 23,000 tons. With these tables, for example, you can quickly find exactly the amount of space needed to store 3,000 tons of rock salt. (The answer is a single, conical pile 100 ft. in diameter at the base, and 31 ft. high.)



Diagrams of two basic rock-salt-storage piles. Conical at left, windrow at right. Note 32° bevel, which applies to both types.

In many plants, however, it is not possible to store salt in one large, conical pile. Instead, it must be stored in a lower, longer, windrow-shaped pile. In this case, International's computations on storage-space requirements apply equally well. The data in the tables permit you to select the height or length of windrow pile best suited to your plant needs.

Again taking the example of 3,000 tons of salt: It can be poured from a portable conveyor belt into a pile 65 ft. wide at the base, 20 ft. high, and 100 ft. along the crest. Or, if such a pile doesn't suit your plant needs, the same tonnage can be stored in a pile 75 ft. wide at the base, 23 ft. high, and 55 ft. along the crest.

Easy way to check tonnage of any salt pile. A problem often encountered by salt-using companies is how to determine the amount of salt in a given storage pile. Here again, International's complete tables will quickly give the answer. Because each measurement in a symmetrical salt pile bears a fixed relation to every other, it's possible to find every measurement when only one is known. Thus, a conical pile 16 ft. high will contain 368 tons of salt.

There is still another way in which International's salt-storage tables are helpful. If you want to cover an outdoor pile with tarpaulin or tar paper, you can easily find the surface area of the pile. For example: the surface area of a conical pile 45 ft. in diameter is 1,870 sq. ft. These comprehensive tables are included in a booklet, "Brine for Today's Industry," which will be sent to you at your request. Simply contact International.

DATA GIVEN IN INTERNATIONAL'S SALT-STORAGE TABLES

Given any amount of rock salt, from three to 23,000 tons, you can find these storage-pile measurements at a glance:

1. **Height.**
2. **Base Diameter.**
3. **Base Area.**
4. **Surface Area.**
5. **Volume.**

The same data apply to windrow segments. And because each measurement bears a fixed relation to every other, you can find every windrow measurement if you know just one.

TECHNICAL SERVICE WITH YOUR SALT

Through skilled and experienced "Salt Specialists," International can help you get greater efficiency and economy from the salt you use. International produces both Sterling Evaporated and Sterling Rock Salt in all types and sizes. And we also make automatic dissolvers in metal or plastic for both kinds of salt. So we can recommend the type and size of salt most perfectly suited to your needs.

If you'd like the assistance of an International "Salt Specialist" on any problem concerning salt or brine—or further information on space needs for rock salt storage—just contact your nearest International sales office.

International Salt Co., Scranton, Pa.

Sales Offices: Atlanta, Ga.; Chicago, Ill.; New Orleans, La.; Baltimore, Md.; Boston, Mass.; Detroit, Mich.; St. Louis, Mo.; Newark, N. J.; Buffalo, N. Y.; New York, N. Y.; Cincinnati, O.; Cleveland, O.; Philadelphia, Pa.; Pittsburgh, Pa.; and Richmond, Va.

FOR INDUSTRY, FARM, AND THE HOME—

STERLING SALT

PRODUCT OF INTERNATIONAL SALT CO., INC.

ton will be sold this year, compared to nine and a quarter million sold last year. And, said Mr. Hennican, the outlook is for cotton consumption to skid to seven million bales in 10 years. A realistic pricing policy is the only solution, he concluded.

More Wool Research and Promotion. Members of the Executive Committee of the International Wool Publicity and Research

Fund, meeting recently in London, voted increased expenditures for world-wide research and intensification of promotional activities.

New Carpet Record. The American carpet industry produced a record 118.4 million square yards of soft surface broadloom floor coverings in 1956, up 10 per cent over the previous year and 32 per cent over 1948, reports the Carpet Institute. Of this production, 64.0 million square yards were woven, and 54.4 million square yards were tufted. The increase in carpets 12 feet or wider is noteworthy. In 1939, about 17 per cent of the industry's woven production was this type; by 1956 it had increased to 68 per cent. About 75 per cent of tufted production is 12 feet or wider.

Tendering Called Fabric Defect. The Textile Analysis Advisory Committee of the National Institute of Drycleaning has ruled that drycleaners' problems arising from sunlight tendering or fading of draperies should be considered a fabric defect, and should not be attributed to customer misuse. The Committee considers that improper selection of dyestuffs is the principal cause of such defects.

Japan to Buy More Cotton? Japan will increase the amount of raw cotton she buys from the U. S., according to a statement made by Prime Minister Kishi during his recent visit to this country. The Japanese Chamber of Commerce says that raw cotton purchases by Japan from the U. S. last year totaled about $179 million, while shipments of finished cotton textiles to the U. S. were about $84 million.

FTC Warns on Cushion Sole Socks. The Federal Trade Commission has warned that it intends to crack down on hosiery manufacturers who are mislabeling cushion sole socks. According to FTC, the Wool Products Labeling Act requires that such socks be labeled to show the fiber content of the various sections of the socks, e.g., "body or body and top, 100% cotton; cushion sole, heel and toe, 15% wool, 85% cotton."

N. C. Hosiery Mill Accidents Down. The accident frequency rate in North Carolina hosiery mills last year dropped sharply below that of 1955, according to a report on the 15th Annual Statewide Hosiery Safety Contest. The rate in

News in Brief

1956 was 3.53 disabling accidents per million man-hours, compared to 4.28 in 1955 and 3.63 in 1954. The severity rate also dropped, from 45.9 days of lost time per million man-hours in 1955 to 34.9 in 1956.

Cannon Outlines Cotton Program. In testimony before the House Agriculture Committee, C. A. Cannon, president of Cannon Mills, listed the following as fundamentals of any permanent cotton policy: 1. Significant increase in cotton acreage. 2. Clear-cut procedure for improving the cotton farmer's net income position. 3. A one-price system. 4. Movement of cotton through regular trade channels, rather than through government hands. 5. Sizable reduction in cotton program costs. 6. No processing tax on cotton goods.

Cotton Policy Injurious to the Industry

"There can be no doubt that governmental policy has been injurious to the industry; the cotton pricing and sales policy favors the foreign producer and the absence of realistic quotas enables said producer to exploit this advantage to the detriment of the American producer.

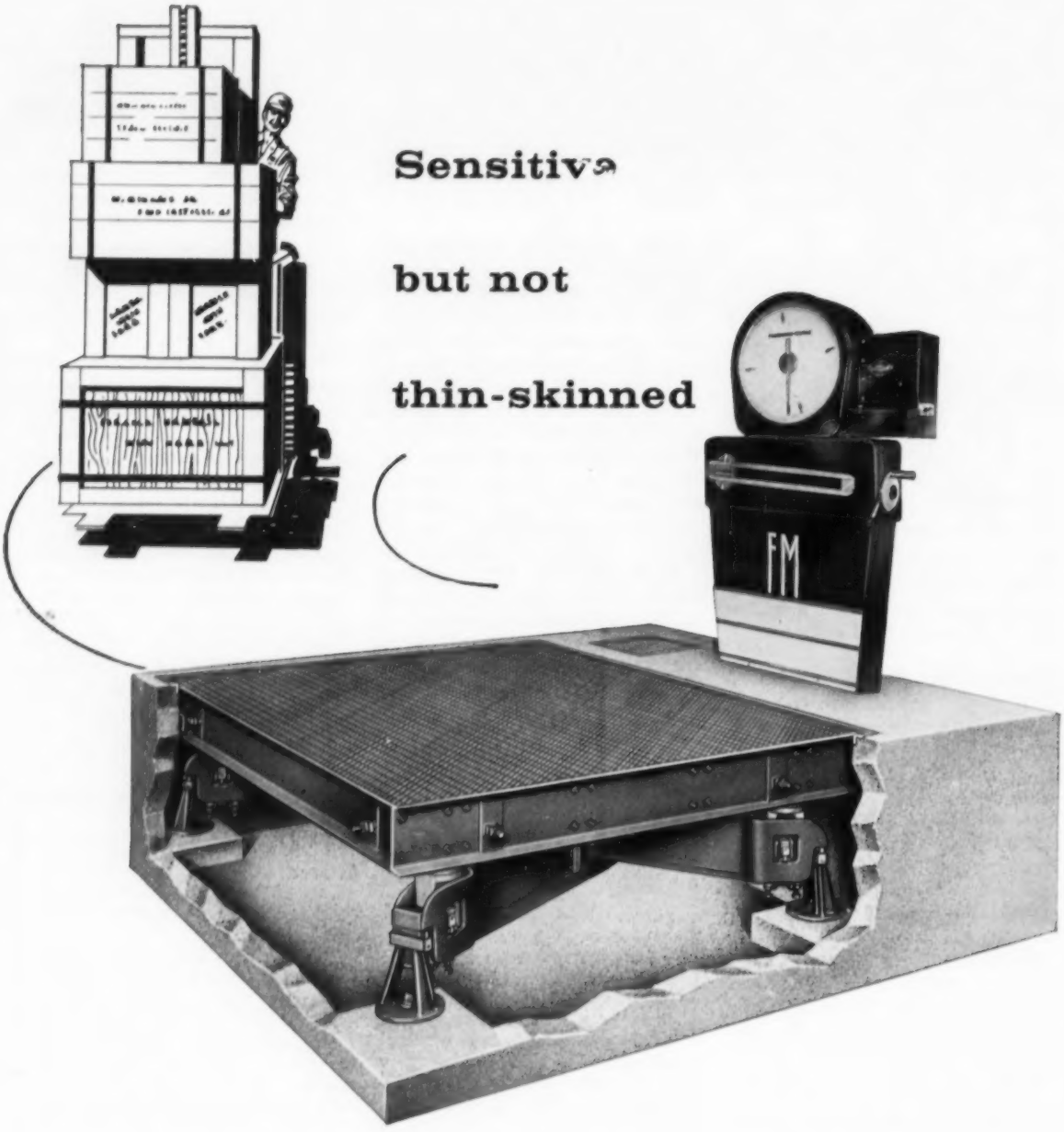
"It would seem desirable and imperative for legislators and Government administrators to review the impact of such policies on the American textile industry. Although we are dealing with a staple, it is entirely possible that pursuit of these policies could seriously undermine a basic production segment of our economy. If this is a conscious, deliberate intent, so be it. But at least it should be conscious and not the product of an unthinking policy. Moreover, the need for governmental review is national in origin.

"This is not the problem of New England mills alone. In the long run it is equally as important for southern mills. If they impede efforts in the short run, parochial hope of killing off the northern mills, their gain will be short-lived.

"As stated above, the board chairman considers the economic plight of this and other mills as one requiring action other than the adjustment downward of wages. He notes that both of the subject parties have joined in a cooperative appeal to Congress for remedial legislation. These efforts should be accelerated and the enlistment of support should be broadened.

"Neither the Union, the Company, nor the employees deserve any blame for the specter of plant closings which hangs over these Maine communities, whose industrial life is so dependent upon the industry and the subject company (Bates)."

Statement made by James J. Healy, impartial chairman of the Board of Arbitration which considered a wage matter involving the Bates Manufacturing Co. and the Textile Workers Union of America (AFL-CIO).



Sensitive but not thin-skinned

A heavily loaded lift truck throws quite a punch at a scale when it rolls on to the platform and stops. A good scale must be designed to absorb this impact without damage to other qualities which make it a precise and delicate weighing machine.

The new Fairbanks-Morse Type S Built-in Scales are tough—and tender. Parallel link suspension absorbs all platform disturbances and protects load bearings. The double web lever system isolates the reading mechanism from torsional strains and twists.

And the new Built-in has other features like 50% less pit depth and many adjustments for fast, easy installation. Capacities are five tons and ten tons. The Built-in is available with Fairbanks-Morse Floaxial dial—with or without printer—or double beam reading mechanism. Send for NEW Bulletin 8106-16 today. Fairbanks, Morse & Co., Dept. TI -8, 600 South Michigan Avenue, Chicago 5, Illinois.

FAIRBANKS-MORSE

a name worth remembering when you want the BEST

SCALES • PUMPS • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • RAIL CARS • HOME WATER SERVICE EQUIPMENT • MOWERS • MAGNETOS

Textile Starting Salaries Low? Average annual starting salary for June graduates of Lowell Technological Institute was $5,311, or $442 per month, reports an Institute spokesman. This is $411 per year more than the average for the class of '56. Highest starting salary accepted was $7,500 for a textile engineer, who had a choice of two equal offers; and lowest was $4,160, for a woman textile designer.

AATCC News. An International Test Methods Committee has been formed as a policy committee of American Association of Textile Chemists and Colorists' Executive Committee on Research, "as a means of bringing more international test information to American industry." * * * Seven local sections of AATCC plan to submit papers in the annual Intersectional Contest, to be held during the Association's 1957 convention.

Wool Mill Consumption Up. Total fiber consumption on the woolen and worsted systems during 1956 totaled 735 million pounds, up 5 per cent over 1955, according to the Bureau of the Census. The total includes 440,682,000 pounds of raw wool; 174,020,000 pounds of noils, reprocessed wool, and other animal fibers; 94,392,000 pounds of man-made fibers; and 25,480,000 pounds of all other fibers.

Trends in Fiber Usage. The National Federation of Textiles has made the following analysis of recent Bureau of the Census figures on fiber usage in men's and women's outerwear: Rayon fabrics continue to lose ground in dresses and blouses, hold even for skirts, and show a gain in women's suits. Cotton gains in men's sports shirts, man-made fibers show an increase in separate trousers, and there is no change in usage of man-made fibers in summer suits.

Yarn Men to Meet. Sept. 19-20 is the date of the annual meeting of Chattanooga Yarn Association. The place: "Castle in the Clouds" on Lookout Mountain.

MERCHANDISING NOTES

Aluminum Co. of America has commissioned Marianne Strengell to weave 6 x 12 rug of 75 per cent aluminum fiber for use on its "Forecast" program. Thirty shades of metallic yarns are to be used in the rug, along with wool and rayon, and a jute backing.

Boston Wool Trade Association has established a fund to promote the use of apparel wool and apparel wool products. Topmakers, brokers, dealers, and others connected with the wool business will be solicited for membership. The program will supplant Wool, Inc.

Chemstrand Corp. will sponsor a situation comedy series, "Sally," with Joan Caulfield and Marion Lorne, next fall on NBC-TV at 7:30 PM, EST, Sunday evenings. The program is claimed to be the most ambitious use of network TV yet undertaken by a fiber producer. Stations which will carry the series serve 9 .5 per cent of the TV-equipped homes in the U. S.

Du Pont Co.'s garment hangtag programs will be extended effective with the spring 1958 season to include blends of 50 per cent or more Dacron with Orlon, and fabrics of 100 per cent Dacron, for men's and boys' wear.

Home Testing Institute, in a poll conducted for the Du Pont Co., found that the majority of men over 21 prefer wrinkle resistant synthetic fibers in their fall suits over suits of "traditional" fibers, presumably wool. The poll asked for opinions on Dacron-wool and Orlon-wool blends.

Plastic Creators, Inc., have provided nylon tarpaulins for the Brooklyn Dodgers, which the

ground crew of 20 men can put over the field in 1 minute and 15 seconds, including the placing of separate mound and plate covers.

National Family Opinion, in a survey conducted for the Du Pont Co., found that 55 per cent of 2,200 women questioned owned at least one Orlon sweater, and that two-thirds of the 55 per cent owned two or more. "Easy care" and "wearing pleasure" were said to be the qualities which made women purchase the garments.

Riverside Hosiery Mill is specializing in an unusual field—doll hosiery—and is now producing the hosiery at the rate of 10,000 dozen pairs a month.

Scranton Lace Co. will in the future show new drapery lines once a year, instead of the usual two showings customary in the drapery field. The decision was made to simplify retail inventory problems, cut down on obsolescence, and reduce designing costs.

Bates Mfg. Co.'s Disciplined Fabrics are being used in a special home showing fashion newsreel produced by 20th Century Fox.

Federal Trade Commission has issued a final order calling on two hosiery companies to cease and desist from preticketing hosiery with fictitious retail prices.

Hess, Goldsmith & Co., Inc., has developed a completely washable lampshade material of Fiberglas fabric laminated on Fiberglas mat, called "Burlette."

Milliken Woolens, Inc., has introduced a wool-nylon dressgoods fabric treated with Mitin mothproofer.

Use these famous Procter & Gamble softeners and lubricants...

Profine

...Paste
...Special Paste
...Flakes

TODAY'S MOST ADVANCED FINISHING AGENTS

for Threads, Yarns, Fabrics!

There's no need these days to have any finishing problems. Whatever your problem, you can be sure that one or the other of the Profines will help eliminate it and help you turn out fabrics that look, feel, sew and sell better! Read below a few of the many reasons why the Profines are used by so many top-flight finishing plants.

Want to be convinced of what Profine can do for you? Then make it your business to try one or more of the Profines in your own plant soon!

Profine

Provides All These Advantages...

- Tremendous anti-static and lubrication properties.
- Full effectiveness at extremely low temperatures.
- Complete ease in making and using permanent solutions.
- Outstanding scorch resistance . . . elimination of discoloration, yellowness, odor development.

Profine

Assures Finest Finishes for All Fabrics!

The Profines work to perfection on all types of threads, yarns and fabrics, man-made or natural! A fabric finished with Profine has all the properties you want it to have—full-bodied smoothness, anti-static action, lubricity. And, equally important, the Profines are always uniform in quality . . . always dependable. When you use a Profine, you can count on every yard of thread, yarn or cloth having the same finish, the same hand!

The Procter & Gamble Textile Representative in your area will be glad to give you all the facts about Profine. Or, if you prefer, write to: Procter & Gamble, Textile Finishes Sales Department, Cincinnati 1, Ohio.

Profine

Developed and made by Procter & Gamble . . . Recommended by outstanding fiber manufacturers . . . Used by leading finishing plants . . .

FOR SMOOTHER TEXTILE PROCESSING, USE P & G'S OLATE, PROXOL, ORVUS AND KYRO PRODUCTS

AN EXECUTIVE *Views*

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

King Cotton – King-Sized Problem

AT THE risk of becoming tedious, we'd like to take another look at the cotton situation. A lot has been written about it lately; we shudder to think of the volumes that remain to be written.

A recent editorial in *Life* magazine carried the subtitle, "Our Government's Farm Madness Pays a Successful Industry to Wreck Itself." *First National City Bank Monthly Letter* titles an article in its June issue, "Farm Policy—A Study in Failure." Unfortunately, the titles are only too true.

The latest reports that we've read on conditions in the farm areas of the nation indicate that 1957 production of price-supported crops will be pretty close to last year's record levels, despite all the government's efforts to get out from under a mountainous collection of surpluses. And this is true despite a U. S. Department of Agriculture estimate that the plantings of major crops are the lowest since 1917.

There are several reasons for what seems to be the paradox of low plantings and near-record crops. For one thing, more than a third of the land put into the Soil Bank has actually been put into uncontrolled crops, instead of being allowed to lie fallow or in hay and pasture.

For another thing, much of the land taken out of use by participation in the Soil Bank is not worth much anyway, or is in drought-stricken areas.

And price supports are on a treadmill in attempting to catch up with production, since improvements in agricultural machinery and methods permit the farmer to turn out bumper crops on smaller and smaller acreages. Agriculture Secretary Benson said in a recent speech:

> . . . A technological explosion is occuring in American farms. Since 1940 production per worker has nearly doubled. Cotton production per acre has increased 65 per cent. These changes make it virtually impossible to curtail agricultural output with the type of controls acceptable in our society . . .

The results of the various farm programs have not been entirely what their proponents expected. In addition to the burden on the groaning taxpayer in footing the bill for the surpluses, another loss is taken when the government attempts to get rid of its embarrassing riches by dumping them abroad.

And then the mill man, whose taxes helped to buy surplus cotton in the first place, is forced to watch it return in the form of cloth or garments from its foreign dumping place and undercut him in his own markets.

Then, as if that wasn't enough, the battered but unbowed taxpayer, who has more-or-less uncomplainingly contributed his more-or-less hard-won dollars to winning friends and influencing people all over the world, finds that he's lost some of the same friends by ruining their agricultural markets through his government's dumping program.

The farm programs are usually explained as plans for protecting the small farmer from ruinous price fluctuations and to assure him his share of the benefits of the growth of the American economy. But, although the budget request for agricultural programs for the coming fiscal year is a record $5 billion—or more than $1,000 per farm—the small farmer does not stand to reap the most benefit from the program.

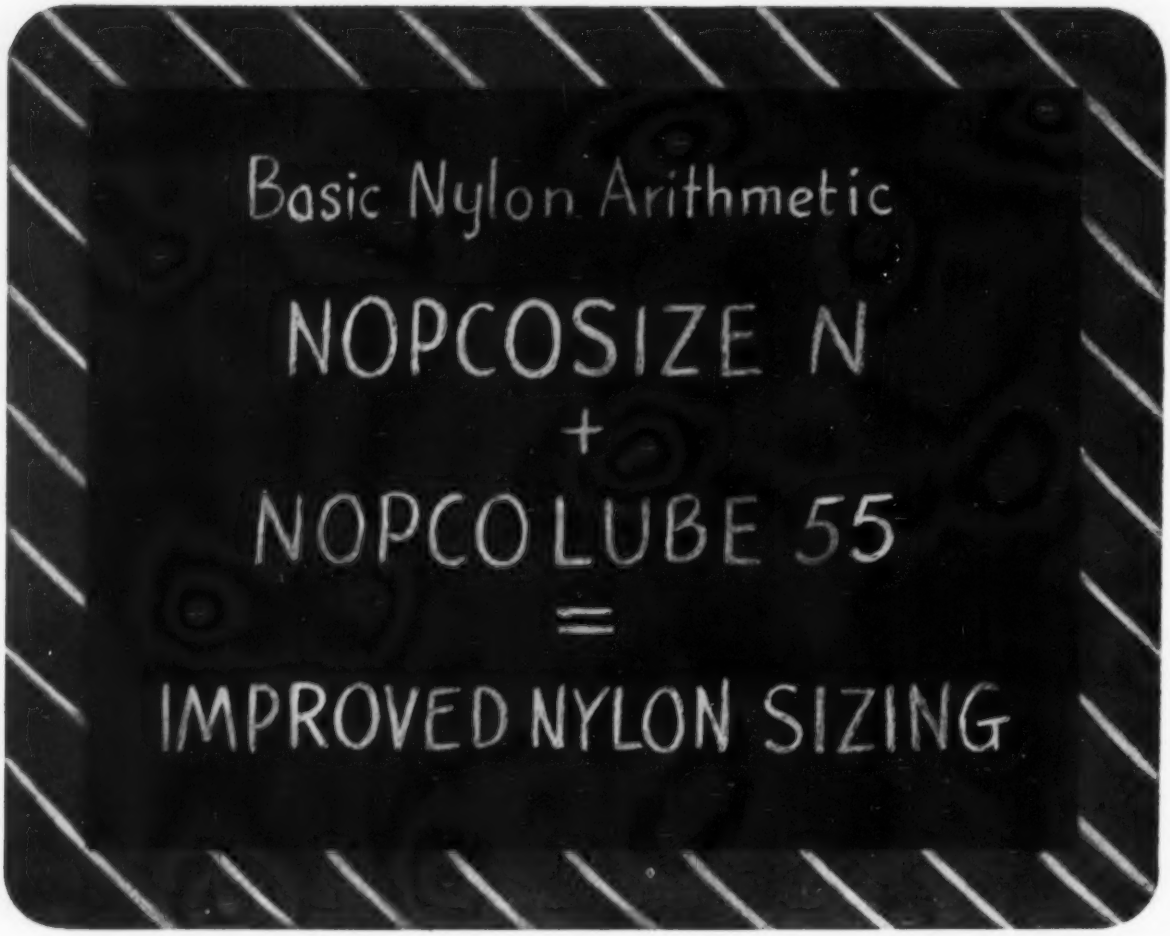
There are about two million "commercial" farms in the United States—farms whose degree of efficiency would permit them to operate profitably without a support program. These farms will benefit from the proposed budget on an average of about $2,500 each. And some of the big mechanized farms will get far more. For example, Mississippi's Delta & Pine Land Co. (a British-owned company), one of the largest and most efficient cotton producers, last year received $1,400,000 in crop loans.*

All this might still be borne

*As this issue went to press, we were interested to see in *The Manchester Guardian Weekly* a statement by W. T. Winterbottom of Fine Spinners & Doublers, Ltd., British owners of Delta & Pine Land Co., at the annual meeting of his company on July 19: " . . . The United States Government remains in the cotton trade, with all the uncertainty and disruption of normal business channels which that entails, acreage is still curtailed with consequent loss of efficiency, especially to the more highly mechanised farms, incentives for farms to produce the most desirable qualities of cotton are still woefully weak . . . "

Since this might sound like strange talk from a representative of one of the chief beneficiaries of the U. S. cotton policy, a further comment of his must in all fairness be given: "During this season most of the cotton grown on our own Plantation in Mississippi has been brought here [to England] and used mainly in our own mills. This operation has been made difficult by the United States export policy. . . . "

—The Editors



. . . and by improved we mean

1. Exceptionally flexible, well lubricated warp
2. Superior split at higher slashing speeds
3. Completely eliminates the need for top waxing
4. Seconds drastically reduced to absolute minimum

Today... the combination of NOPCOSIZE N† + NOPCOLUBE 55† in the size pan is acknowledged to be the most successful technique for sizing producer's twist nylon.

It makes sense (and dollars*, too, of course) to let this Nopco team go to work for you.

We'll supply enough for a trial run to prove our point—see for yourself. Write Nopco Chemical Company, Harrison, N. J.

1907 – 1957
50 Years
OF PROGRESS IN CHEMISTRY

NOPCO

†Trademark of Nopco Chemical Co.
*See points 2, 3 and 4 above

Plants: Harrison, N. J. • Cedartown, Ga. • Richmond, Calif. • London, Canada

philosophically if it had helped the cotton situation. The average per capita consumption of cotton is about the same now as it was thirty years ago (23.3 pounds in 1926, and 23.7 pounds in 1956), despite the tremendous rise in the standard of living over the same period. Exports were nearly 11 million bales for the 1926-27 crop; they fell to 2.2 million for the 1955-56 crop. While cotton exports for this season are estimated at 7.5 million bales, the increase was made possible only by the dumping of government-owned cotton at below-cost prices.

We again quote Agriculture Secretary Benson:

> Controls are not effective in reducing over-all agricultural production, despite the severe restrictions they impose on farmers' freedom to produce and market . . .
>
> Since we apparently cannot legislate scarcity, we must learn how to live with abundance. If any product is abundant, it cannot long be priced as if it were scarce. . . . We cannot build markets by pricing ourselves out of them."

Rayon to subsidize cotton?

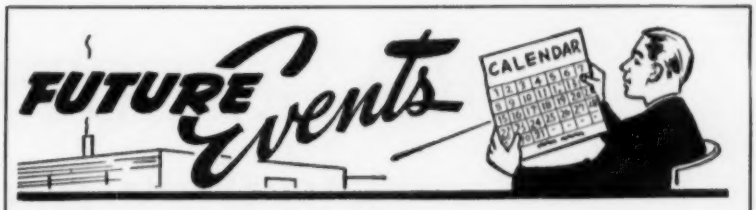
We read in the paper the other day that Senator Russell of Georgia and Representative Whitten of Mississippi had a new cotton support bill which they planned to present to their respective branches of Congress. Some peculiar measures get introduced on Capitol Hill, but this one we think is a real dilly.

It provides that farmers could raise all the cotton they wanted, and all of it would be sold at world prices. However, each farmer would get his share of a national quota, for which he would receive certificates. The price of the certificates would be set to "reflect full parity of income to the cotton farmer."

Mills would then have to buy certificates covering every pound of cotton they used, and importers of textiles would have to buy certificates for the fabrics they imported.

So far, this is probably no more cockeyed than most of the other farm programs that have come and gone over the years. However, this bill also has a gimmick that gives

(Continued on page 203)



1957

Date		Event	Location
Aug.	3	Pacific Northwest Section AATCC annual outing	Mt. Hood Golf Club Welches, Ore.
Sept.	4-6	Fiber Society meeting jointly with members of Textile Institute	Hotel Statler Boston, Mass.
	13	Northern New England Section AATCC outing	Wachusett Country Club W. Boylston, Mass.
	13	Southeastern Section AATCC	Country Club Columbus, Ga.
	20	South Central Section AATCC	Hotel Patton Chattanooga, Tenn
	19-20	Fall meeting Textile Quality Control Association	Hotel Barringer Charlotte, N. C.
	26-27	Combed Yarn Spinners Association annual meeting	The Cloister Sea Island, Ga.
	27	Joint meeting Delaware Valley and New York Sections AATCC	Hotel Hildebrecht Trenton, N. J.
	27	Rhode Island Section AATCC	Narragansett Hotel Providence, R. I.
	27	Western New England Section AATCC	Rapp's Restaurant Shelton, Conn.
	28	Piedmont Section AATCC	Hotel Barringer Charlotte, N. C.
	28	Textile Operating Executives of Georgia fall meeting	Ga. Tech Atlanta, Ga.
Oct.	2-3	Chemical Finishing Conference	Hotel Statler Washington, D. C.
	3-4	Quartermaster Association annual convention	San Francisco, Calif.
	7-9	Institute of Textile Technology Technical Advisory Committee and Board of Trustees meeting	ITT Charlottesville, Va.
	10-11	Fall meeting Southern Textile Methods and Standards Association	Clemson House Clemson, S. C.
	12	Textile Operating Executives of Alabama fall meeting	Thach Auditorium Auburn, Ala.
	15-18	A.S.T.M. Committee D-13 fall meeting	Sheraton McAlpin Hotel New York City
	26	Mid-West Section AATCC	Bismarck Hotel Chicago, Ill.
Nov.	14-15	A.I.E.E. Conference on Textile Industry Applications	N. C. State College Raleigh, N. C.
	14-16	AATCC National Convention	Hotel Statler Boston, Mass.

1958

Jan. 30-Feb. 1		Textile Div., American Society for Quality Control annual conference	Clemson House Clemson, S. C.
Feb.	12-14	Cotton Research Clinic	Carolina Hotel Pinehurst, N. C.
Mar.	18-21	A.S.T.M. Committee D-13 spring meeting	Sheraton Park Hotel Washington, D. C.
Apr.	10-12	American Cotton Manufacturers Institute annual meeting	Hollywood Beach Hotel Hollywood, Fla.
	16-18	Alabama Textile Manufacturers Association annual meeting	Hotel Buena Vista Biloxi, Miss.
	21-22	National Association of Hosiery Manufacturers annual meeting and Hosiery Industry Conference	Hotel Roanoke Roanoke, Va.
	23-26	Cotton Manufacturers Association of Georgia	Boca Raton Hotel & Club Boca Raton, Fla.
30-May 1		The Fiber Society	Clemson House Clemson, S. C.
May	6-8	Canadian Textile Conference	Queen Elizabeth Hotel Montreal, Que., Can.
Sept.	25-26	Northern Textile Association	Wentworth-by-the-Sea Portsmouth, N. H.
Oct.	6-10	Southern Textile Exposition	Greenville, S. C.
	15-25	International Textile Machinery Exhibition	Belle Vue Manchester, England
30-Nov. 1		AATCC National Convention	Hotel Conrad Hilton Chicago, Ill.

SPRINGS COTTON MILLS
slasher order in textile

● **LANCASTER, S. C.—**
14 West Point 9-Cylinder slashers provide slashing capacity for 9,000 looms!

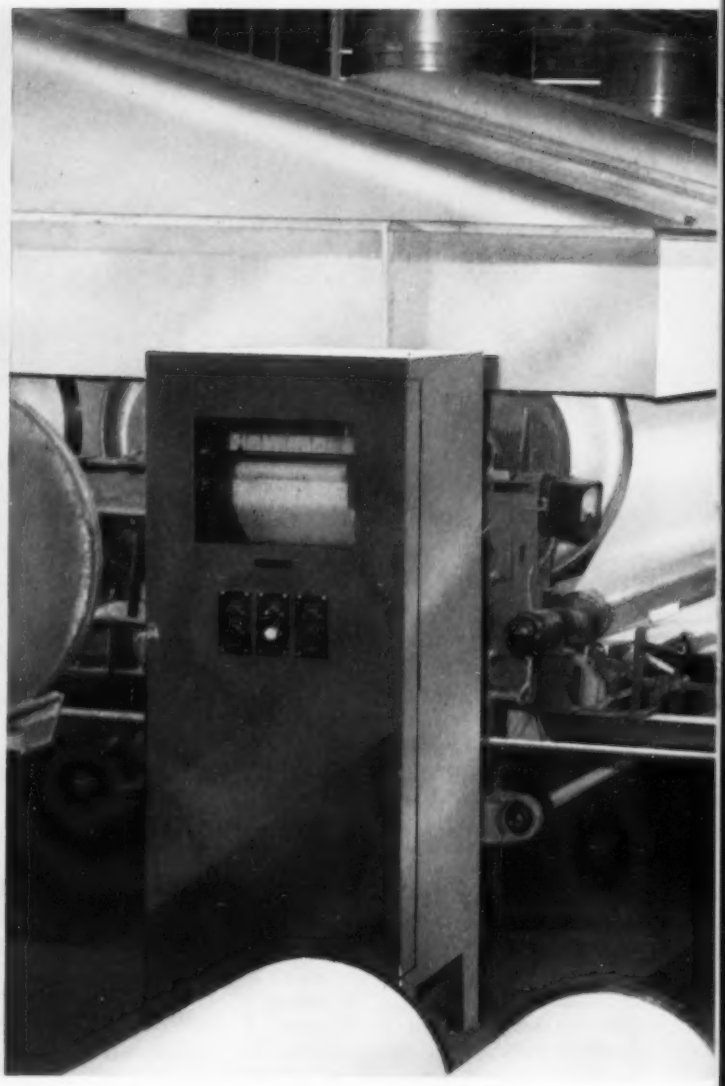
● **FORT MILL, S. C.—**
Four West Point 11-Cylinder giants are each slashing 1850 to 2050 pounds of warp per hour!

● **KERSHAW, S. C.—**
Three West Point 9-Cylinder slashers provide drying speeds of about 125 yards per minute.

● **SPRINGSTEEN, CHESTER, S. C.—**
One West Point 9-Cylinder slasher replaced *two* 3-Cylinder slashers!

● **GAYLE, CHESTER, S. C.—**
Three West Point 9-Cylinder slashers complete this 100% West Point installation in all five Springs Cotton Mills.

A production capacity that could only be equalled by 40 old-style slashers!



West Point Slashers provide *higher* drying rates, *better* warps

Anticipating the addition of 1800 looms, Springs Cotton Mills looked at slashers with an eye toward increasing slasher room capacity. The solution was found in what became the world's largest slasher order. Twenty-five West Point Foundry Multi-Cylinder slashers replaced 32 old-style slashers and still provided the extra capacity required for those 1800 additional looms! In addition to increasing drying rates and maintaining high quality, these West Point slashers are extremely versatile, capable of handling cotton, spun or filament synthetics. Multi-motor drives mean smooth acceleration and deceleration, constant

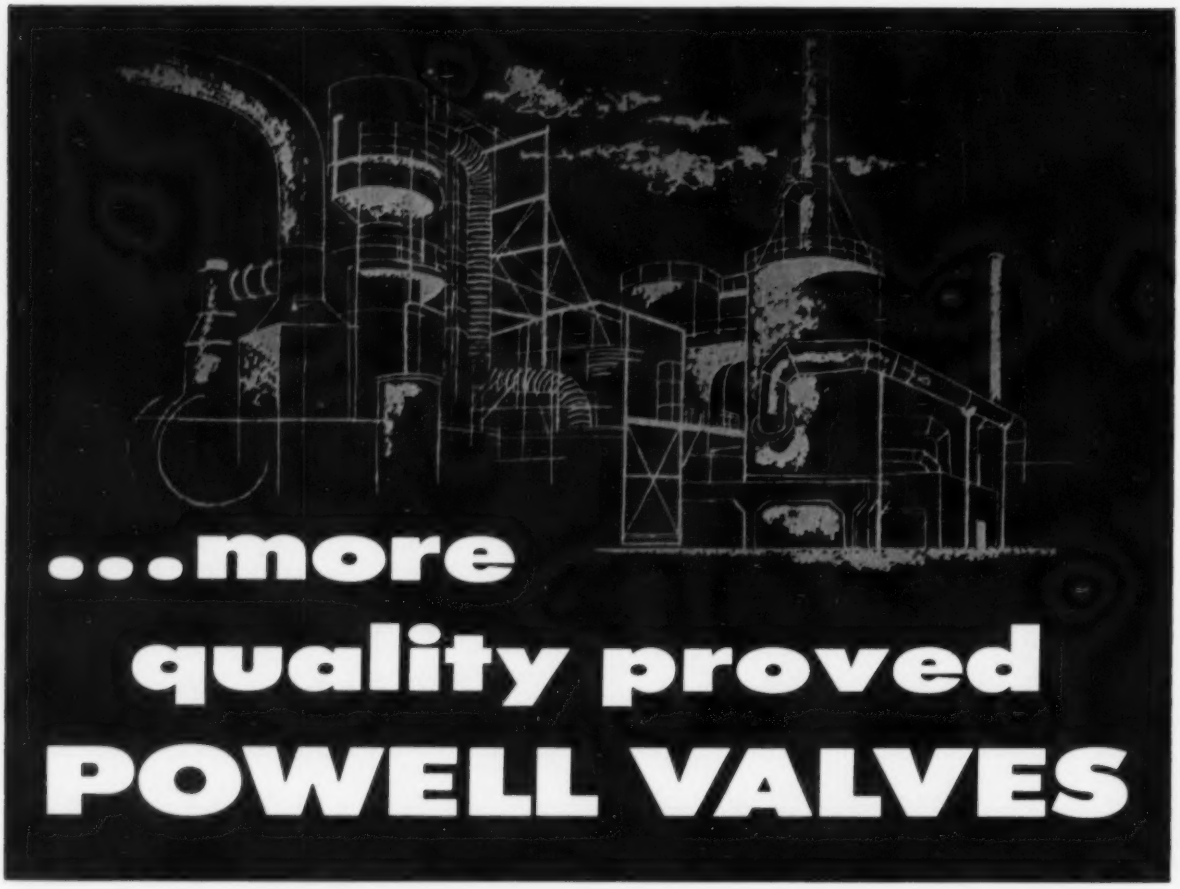
places largest history

25 West Point Foundry Multi-Cylinder Slashers now provide more warp for 5 Springs mills

and accurate control of yarn tension, *fewer* loom stops. Coupled with the higher capacity of West Point Foundry Multi-Cylinder slashers, they more than answer highest production and quality requirements. Whether yours is a complete slasher installation or modernization of present equipment, call West Point Foundry . . . specialists in slashers.

WEST POINT Foundry & Machine Company

WEST POINT, GEORGIA



...more quality proved POWELL VALVES

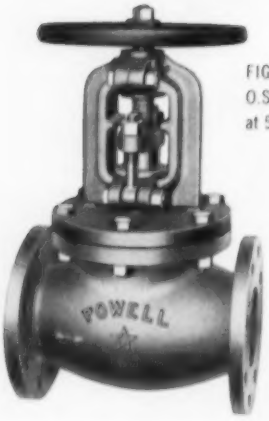
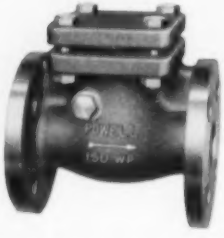


FIG. 2429—Large Size Stainless Steel O.S.&Y. Globe Valve for 150 Pounds W.P. at 500 F. or 230 W.P. at 100 F.

FIG. 1314A—1500-Pound Integral Bonnet Stainless Steel "Y" Valve.

FIG. 2453SG—Stainless Steel O.S.&Y. Gate Valve for 150 Pounds W.P.

FIG. 2342—Stainless Steel Bolted Cap Swing Check Valve for 150 Pounds W.P.



Designed for long life, designed for dependable service

Consult your Powell Valve distributor for all the facts about quality proved bronze, iron, steel and corrosion-resistant valves. For every flow problem . . . there is a Powell Valve to solve it.

THE WM. POWELL COMPANY, CINCINNATI 22, OHIO . . . 111th YEAR

"Passing the pass board" or running out the thread rail is one of the two cleaning duties the author recommends for the spinner.

by Maley Chagro
Exclusive

Are your spinners really high-paid cleaners? Here's why you should

LET SPINNERS SPIN!

MANY mills whose spinners have performed most of the major cleaning duties connected with the spinning tasks have found that these cleaning duties were also major tasks. The revelation that their spinners were chiefly high-paid cleaners led to a re-evaluation of the spinner's task with the result that these tasks have become specialized and now consist mainly of piecing up ends and changing roving. Increased quality and decreased costs have resulted from the change.

Most spinners dislike cleaning anyway — especially the combined tasks of cleaning and picking rolls — and the elimination of this operation is welcomed by older spinners. The removal of cleaning duties from the spinner's task has also simplified the training of learners.

The elimination of picking and cleaning rolls by spinners (even with mechanical roll pickers) also reduces the possibility of a spinner piecing up an end or handling roving with dirty hands. Better quality yarns result.

The various duties of the spinner have been categorically defined and classified as "side spinning with or without cleaning duties, or limited cleaning duties only." There is, however, another classification that should be added to this category, and that is the "combination spin and doff" task.

This is basically a piece-work task in which the operator's wages are determined by the hanks produced (unlike "side spinning"

TABLE 1

Average and Total Times per Element Operative Devoted to Spinning/Cleaning per Frame Side of 120 Spindles, 40 Hours

Yarn: 30s warp, carded — Doffing Cycle: 10 hours

Operation	Average Time per Element (Minutes)	Number of Times Task Was Performed	Total Time (Minutes)
Brush and clean rings	1.50	4	6.00
Pass board	.35	20	7.00
Clean side ring rails	.25	40	10.00
Beam and bottom creel cleaning	4.50	5	22.50
Clean middle creels	1.50	10	15.00
Frame ends & top creels	.75	5	3.75
Clean and pick top front rolls	11.00	2	22.00
Clean and pick middle rolls	7.00	1	7.00
Clean and pick back rolls	7.00	1	7.00
Pick underclearers	30.00	0.250	7.50
Pick rotary clearers	20.00	1	20.00
Put roving in creel	.33+	133	44.00
Piece up ends	.30	120	36.00
		Total	207.75

TABLE 2

Average and Total Element Times per Operative with Minimum Cleaning Duties

Operation	Average Time per Element (Minutes)	Number of Times Task Was Performed	Total Time (Minutes)
Brush and clean rings	1.50	4	6.00
Pass board	.35	20	7.00
Put roving in creel	.33+	133	44.00
Piece up ends	.30	120	36.00
		Total	93.00

where wages are determined by the number of sides tended and the pay per side). Despite the higher production claimed under the "spin and doff" piece-work method, one mill abandoned the "spin and doff" system because the crowded conditions invariably led to a higher accident severity rate.

The indirect costs offset the higher production gains. Furthermore, women on such tasks were more susceptible to back strains and injury, especially when they had to lift and pile their own doffs. Good housekeeping in "spin and doff" departments is difficult to achieve. By specializing the task — eliminating the doff operation — many of these hazards also were eliminated.

Limited cleaning in the specialized spinning tasks should consist of those cleaning operations that best can be done by the spinner without interfering with her main duties of piecing ends and changing roving — and without disrupting cleaning schedules that would include the balance of all cleaning duties which were formerly part of the spinner's task.

The limited cleaning duties in the accompanying tables are designated as "pass passboard" and "brush and clean rings." It is obvious that once the cleaners have been assigned to new cleaning schedules, they should not be called back to the frames to brush and clean rings on the doff and to pass the board.

It is relatively a minor matter for the spinner, who is always in the vicinity of her frames when they are being doffed, to brush and clean the rings, and to pass the board on her regular patrol. Though limited cleaning can be classified as minor in relation to the spinner's task, all cleaning duties are important and quality standards should be rigidly maintained.

Naturally, the elimination of the main cleaning duties from the spinner's task will increase the number of sides the spinner can tend, and materially reduce direct production costs. The savings accruing from this source are far greater than the money that will have to be expended for additional cleaners.

Time studying every operation is important, and averages must be drawn for such operations as piecing up ends and changing roving. Ends-down tests will determine the average ends down per thousand spindle hours. Here an option can be exercised to determine the ends-down situation to meet local tastes. This may be in the form of ends down per thousand spindle hours, ends down per side per week, ends down per side per week expressed as a percentage figure, etc.

Knowing the number of ends down per week and the average time the spinner devotes to piecing up one end, one can easily calculate the amount of time the spinner can be expected to spend piecing up per unit time.

Roving run-out must be established, and this is often easiest done by calculating the yarn weight produced per spindle hour. With this figure it is a simple matter to divide the yarn weight produced per hour per spindle into the net weight of the roving package to ascertain the running time in hours. The figure must of course be adjusted to reflect the operating

efficiency of the spinning frames.

Once the average or standard time the spinner needs to set in one roving package is determined, the total time the spinner spends at setting in roving can be obtained by multiplying the standard or average time per bobbin by the number of bobbins to be set in in unit time.

Charting all operations of the spinner with a full cleaning task is important prior to the full specialization of the task. Table 1 reveals a full spinner's task with all cleaning duties. Table 2 indicates the conditions after the task was specialized.

The tables indicate the average and total time the spinner devoted to one side of 120 spindles for a period of 40 hours. From the actual working week of 40 hours (2400 minutes) ten per cent is deducted for personal allowance. The resulting minutes are the actual working minutes that determined the final task.

Over 61% of the task was chargeable to cleaning duties, and less than 39% to piecing up ends and changing roving. As the 207.75 minutes represent the total average minutes the spinner worked on one side in 40 hours, and 2160 minutes were actual working minutes allotted weekly (10% rest or personal allowance), the actual task amounts to 10.4 sides (2160 divided by 207.75).

With the reference data thus available the task can be easily specialized. The total sides tended can be more than doubled. Table 2 shows the conditions prevailing after the cleaning duties were changed.

More than 86% of this layout is chargeable to piecing ends and changing roving and less than 14% to cleaning. The 93 average working minutes per side divided into the actual allotted working minutes per week equals 23.2 sides. With such a classification and specialization of the spinner's task, the spinner will actually be doing what she is primarily trained and paid for — piecing up ends and changing roving.

The era of full specialization has been long overdue. With rising labor costs, materials costs, domestic and foreign competition, all costs should be fully re-examined. Specializing the spinner's task will not only reduce costs, but will increase the quality of the yarn.

Here's an improved nylon carpet yarn splice

■ A new technique for splicing yarns of Du Pont carpet nylon, to allow continuous tufting operations in a carpet mill with a minimum of interruptions due to splice failure, has been announced by the technical service section of Du Pont's Textile Fibers Department.

Described in a technical information bulletin now available from Du Pont, the splicing method is said to provide carpet tufters with a neat, strong yarn joint that is extremely effective with carpet yarns of 100 per cent Du Pont carpet nylon.

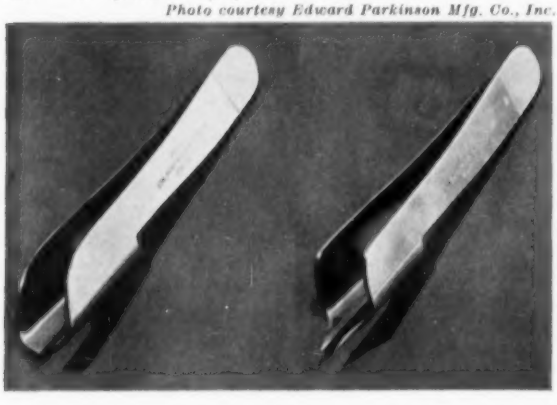
Two methods of preparing the yarn ends for splicing are offered. One method, for use primarily with low-twist yarns, calls for the fluffing-up or unraveling of ends with knife or scissors for a distance of a quarter to three-eighths of an inch. The second method preferred especially for yarns of higher twist, uses burling irons instead of scissors to cut and taper the yarn ends simultaneously.

Latex splicing compound is used in producing a joint which is so small and flexible it will pass easily through carpet tufting needles without snagging or breaking either the yarn or the needle.

Improved efficiency in tufting operations has been reported where this new splicing technique has been adopted.

Here are the burling nippers used during the laboratory and trade tests for preparation of the yarn ends by the second method mentioned here. The end to be spliced is cut and "tapered" simultaneously with one pull of the nippers. Best results are obtained by pulling the nippers away from the cutting point with one hand while holding the yarn firmly in the other hand. Both ends to be spliced are prepared in this manner.

Photo courtesy Edward Parkinson Mfg. Co., Inc.



The wrist type of latex applicator with a ball-feed is recommended for this splicing technique. Apply compound to the yarn end directly from the applicator, rather than transfer it with the fingers. Use a splicing compound that sets uniformly and quickly but not too rapidly to prevent the operator from producing a strong, well-formed joint.

Photo courtesy Glenn Looper Mfg. Co.

In the printing department, journeyman printers have at least seven years experience. Printed cloth is checked at the printing machine as well as immediately after printing and drying to catch faulty printing at the earliest possible moment. Colors are matched and checked on a small printing machine which makes sample color "spots." Carefully kept records simplify matching.

Supervisors control quality

Department supervisors do the trouble shooting at Clearwater Finishing Plant

Goods in process are inspected frequently

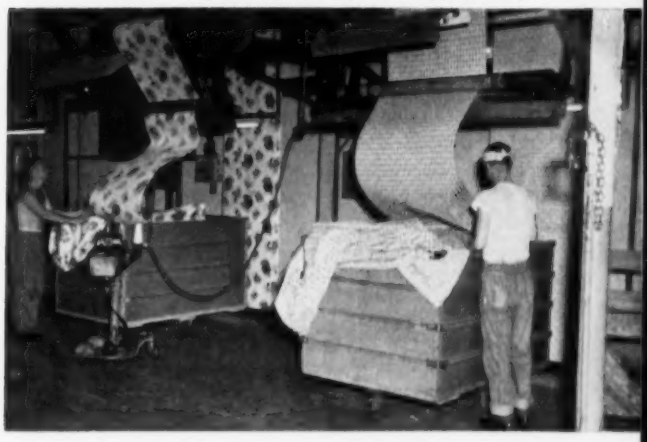
The results are high quality and few seconds

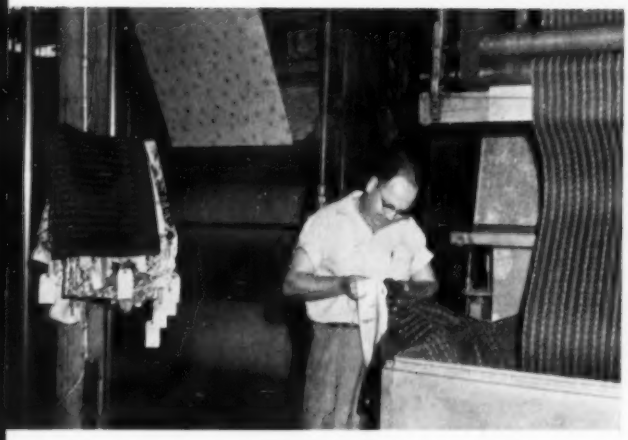
Staff prepared Exclusive

CLEARWATER Finishing Plant, Clearwater, S. C., believes in having foremen who know their job and run it efficiently. Any difficulties arising within a department are handled by the department supervisors either up or down the processing line, depending upon where the trouble started, and seldom is anyone above the supervisor's level called in on a problem in process.

In this plant seconds are low, quality is high, and employees have no lay-offs (the plant has operated 50 weeks each year since it was opened in 1929). Clearwater has quality to sell, and they sell it.

Grey room check of incoming fabrics (top left) establishes quality level before finishing begins. Inspection following soaping and drying (top right) is for check on damaged cloth, shade, and print imperfections. Finish is matched to "hand" of standard sample (bottom left). Elmendorf tear tester is used to keep a constant check on all phases of the operation (bottom right).





Costs are kept low by satisfied employees, high morale, high production, and good technical methods.

Inspectors in the grey room check the cloth for quality as it is received to establish the quality level of the fabric. This is a "spot check" operation, and the operative also cuts swatches of the cloth for checking breaking strength and construction of the grey goods for comparison with the finished goods later.

The cloth is treated first in the desizing and bleach kiers, or on the Becco system continuous bleach process tailored for the plant. Minimum standards are carefully controlled by titrating the processing liquors before the solution is applied as well as once each hour during processing. Caustic boil, peroxide bleach, and sour liquor are all titrated regularly.

The desize mix is made up ahead of time and to the exact strength for the entire run of goods. An analysis of cloth from the desize box is made twice each week to determine results achieved. This work is done in a well-equipped laboratory in the plant.

After bleaching and washing, the cloth is straightened and width is controlled at the dryer. From here the goods are relayed to ceramic tile lined white storage bins, where mechanical cloth pilers pleat the cloth in uniform layers to await transfer to the print room or dyehouse. Mechanical pilers are used throughout the plant, thereby eliminating this manual chore altogether.

The caustic solution used in the mercerizing range is made up in a big tank for one complete shift of operation and is titrated upon preparation to suit the effect to be achieved.

SUPERVISORS are responsible for actually checking the goods constantly at the dye ranges for quality and shade. The goods are inspected after every operation and in many instances during the process.

In the printing department, journeyman printers have at least seven years experience; they may seem to have more supervision than might be considered necessary in some instances, but high quality

and low seconds indicate that the additional supervision pays off.

Colors are matched and checked on a small printing machine which makes sample color "spots." These are compared with originals made at the time of the first run or which may be made to compare with a customer's painting. Careful records are kept on all runs to simplify matching when another run is necessary.

All colors and chemicals are checked carefully for fastness, uniformity, and other pertinent characteristics upon arrival at the plant to assure that no problem arises as a result of faulty or inconsistent ingredients.

A "swing" supervisor inspects the cloth from printing to aging, a further emphasis on management level observation of processing. The dry cans for the printing machines are enclosed on the floor above the printing machines to permit cooler working conditions in the aging room.

Work from the print shop is inspected and cleaned up if necessary in the soap room. There is one inspector for each soaper, and he checks for damaged cloth, shade, and printing imperfections. These inspectors call for separation of bad goods for correction or downgrading if necessary. After the goods leave this department fault correction is often too late and too costly, so possible troubles are carefully watched for here instead of waiting until after finishing.

FOREMEN in the finishing department are responsible for matching finish to customer sample. This method is considered appropriate in that the customer orders by "hand" and selects the sample to be matched by that method.

Permanent finishes call for specific percentages of ingredients in most instances and are handled accordingly by careful measurement when chemical batches are made up, and the results are subsequently rechecked in the lab. All resin treatments are checked in the lab both before and after application on the cloth to determine breaking strength, wrinkle recovery, tear strength, shrinkage, and this department notifies the assistant superintendent immediately upon finding something off standard.

Bancroft standards are used for Everglaze finishes, and other appropriate standards are closely adhered to in accordance with the finish applied. Both AATCC and ASTM standards are employed, as appropriate. The goods are held to a pH of 6.5-8.0 tolerance so that customers who may subsequently apply resin treatments to the cloth won't run into trouble.

Common wash tests are conducted as applicable, and Fade-O-Meter tests are made for fastness. Also, the usual array of other testing equipment is in daily use to uncover or predict troubles. An Elmendorf tear strength tester is used with good results in this plant.

THE FINAL step in quality control before packing for shipment takes place in the put-up department by skilled hand-folders. Here the finished goods are given careful scrutiny under modern lighting conditions, pieces are cut to required lengths and placed on a rapidly moving conveyor belt for packing. Training and experience are stressed in this department to insure high standards.

All employees at Clearwater Finishing Plant are selected on a basis of standards applying to each job in question, including height, reach, vision, character, and other factors relating to the job to be done. In this way the labor turnover has been kept to about half the South Carolina state average for finishing plants. The employee selection program is given credit for an important part of the quality program.

This plant packages dress prints, "Invader" permanent finished goods, chintz, sateens, pajama goods, curtain materials, novelty fabrics, special finishes, and a complete line of high grade draperies.

Expansion of industry-wide wool research efforts urged

■ Intensified wool research efforts will immeasurably help wool to improve its position against competition, Dr. Gerald Laxer, director of science and technology for the Wool Bureau, declared recently in a talk before the National Association of Wool Manufacturers' seminar at the Philadelphia Textile Institute.

Dr. Laxer called for increased cooperation in support of wool research on the part of the wool manufacturing industry. "If management more effectively employs the results of past wool research and greatly expands its support and encouragement of present and planned wool research activities, it will properly augment and, therefore, accelerate other efforts to strengthen the industry," he said.

Calling for an increase in cooperatively supported research projects, Dr. Laxer outlined a technical research program which would benefit all segments of the industry. The program includes research to minimize processing damage, the search for new and improved properties, studies of the relationship of wool fiber properties to fabric performance, and fundamental research aimed at discovering new processing concepts and techniques for producing higher quality wool yarns and fabrics.

Management support of wool utilization research is the best guarantee of a healthy future for the industry, Dr. Laxer said. "Cooperatively supported research efforts which elevate the efficiency of all individual units in an industry need never destroy the single individual's competitive position," he pointed out. "There will always be room for a specific mill's initiative and foresight to enhance its competitive stature."

Dry fluid clutch reduces maintenance and improves quality by providing a

Smooth start for wool cards

Staff prepared

Exclusive

A DRY fluid clutch provides an effective way to handle many difficult drive problems on woolen cards at Manetta Mills, Lando, S. C.

Also called "progressive starting clutches," the units were selected for use at Manetta because tremendous inertia must be overcome to start the woolen cards from rest. 84-inch woolen cards are used here, and the drive eases the shock of power application and doesn't strain card parts. Smoother starts prevent breakage and reduce maintenance on motors, gears, and bearings.

Initially, 15 hp is applied on finisher cylinder, and about one minute is required to bring the card up to speed—72-75 cylinder rpm. Initial load is about 90 amperes at 550 volts, and this drops to 14 amperes at operating speed. Initial rush of current is cut to minimum duration, the equivalent of no-load starting; thus, demand rate is lowered, and power factor is improved.

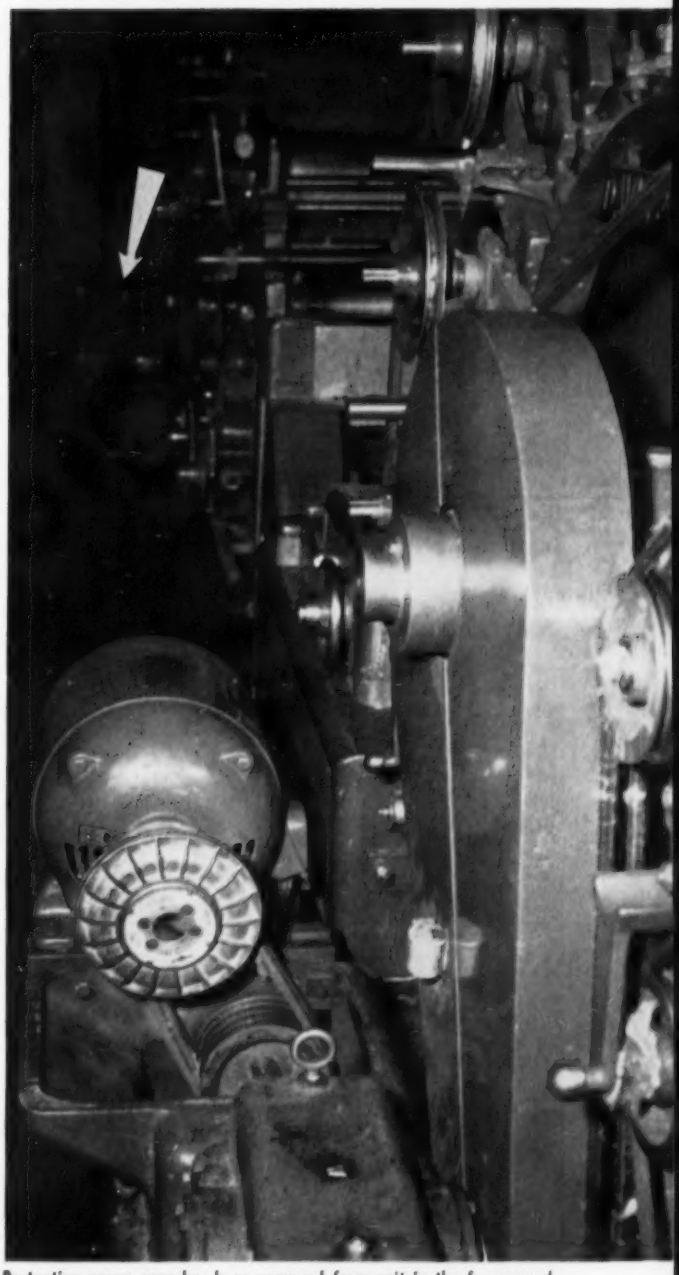
These units have been in operation at Manetta for more than two years with satisfactory results, and maintenance to date has amounted to replacing seals twice. No disadvantages have been noted to date.

Card starts are now consistent and not jerky (which would break down the web). Other card maintenance is minimized because card settings are not upset by jerky starts. Roving shows good even appearance due to absence of thin and thick places which would be introduced by jerky starts.

The "fluid" in these dry fluid drives is heat-treated steel shot. A measured amount, called the flow charge, is contained in the housing which is keyed to the motor shaft. Upon starting the motor, centrifugal force throws the flow charge to the perimeter of the housing, packing it between the housing and the rotor which transmits power to the load.

After initial starting, with slippage between housing and rotor, the two become locked together and achieve full load speed, operating without slip and at full efficiency. There is no slip at normal operating speeds, assuring no wear, no heat, and no power loss.

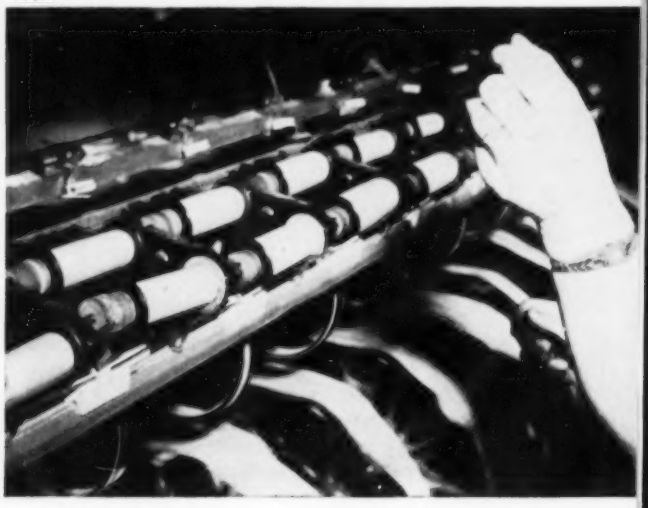
The dry fluid drives are called "Flexidyne," and were supplied by the card manufacturer as a power option. They are made by Dodge Mfg. Corp.



Protective cover cage has been removed from unit in the foreground to show motor and dry fluid clutch; protective cover is in place on far unit (arrow). The clutch produces constant torque for a given input speed, regardless of the percentage of slip between the rotor and the housing.

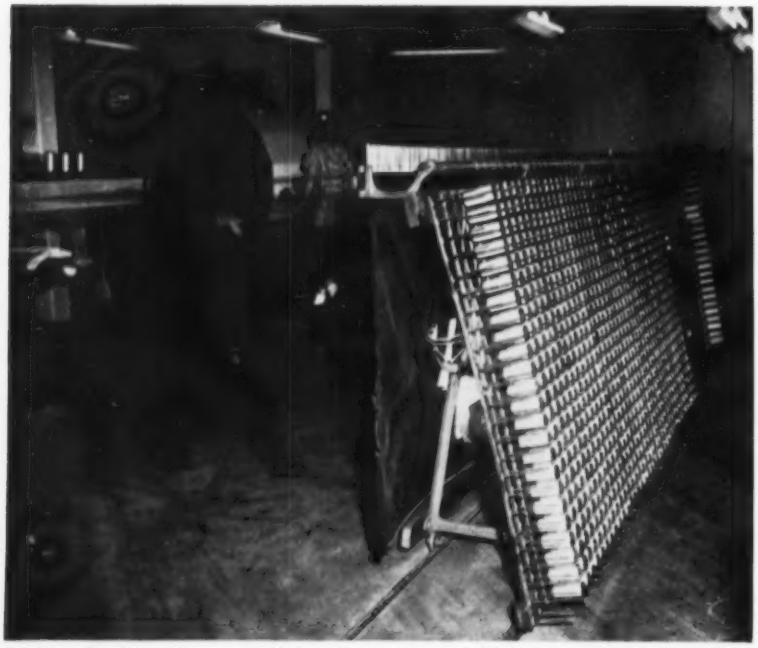
Part of the quality control program is a system of loom maintenance checks. The employee is setting the pick.

Knots and bobbin sizes are important factors in making good silk warps.



How they reduced seconds

in Schwarzenbach-Huber's Front Royal silk and synthetics weaving plant



Bobbins of uniform size are creeled at the warper, and felts are used to control tension.

Staff prepared
Exclusive

ABOUT 80% of the production at the Front Royal, Va., plant of Schwarzenbach Huber Co. is on silk goods. The balance is on Dacron, nylon, acetate, and other synthetics.

Over a three-year period seconds on the highly diversified and specialized constructions have been reduced from 15% to as much as 40%. The reductions depend on the type of fabric being produced.

The improvement in quality is a product of a vigorous program involving maintenance, employee training and prompting, and other basic elements of plant operation.

Efforts demanded by the program actually were directed into four specific avenues: (1) the maintenance of correct tempera-

tures and relative humidities; (2) good loom maintenance; (3) good warps; and (4) housekeeping to provide the plant conditions needed to produce clean cloth. The local manager, Charles Gochenaur, set forth the above fundamentals as keynotes of the successful program.

This mill receives silk in skein form. Processing includes winding, warping on silk system, weaving, examining, and shipping. The fabrics are loom finished and embrace a variety of suitings, draperies, shirtings, and industrial fabrics. Synthetics are received in warp form already slashed at another plant owned by the parent company.

Atmospheric conditions in the weave shed are maintained by Bahnson humidifiers connected to air changers. AMCO atomizers are used in the quilling department; and conditions are maintained at 82 F and 62-64 per cent relative humidity the year around by evaporative cooling. These conditions permit the most efficient weaving on an over-all basis. The correct conditions were arrived at through experimentation.

There are 192 S-6 and 12 multipurpose looms in production. Box looms operate at about 85-90 per cent efficiency, and this figure is based on three warp and filling stops to one mechanical stop on an average covering 204 operating looms. Looms measure from 54 inches to 60 inches between lay swords and operate at about 162 picks per minute on a three-shift basis, five days a week.

Good loom maintenance in this plant means good loom fixing. One man does nothing but lubricate looms; and each loom is carefully inspected at the warp change.

A daily inspection is performed by each shift foreman who checks for defective cloth on the looms. Individual settings are not then checked, but faulty fixing shows up on the cloth at inspection on the loom.

Periodically fixer - foreman meetings are held to discuss fixing problems. These meetings are scheduled about once every three months, and all fixers and all foremen gather in one group. This procedure permits different shifts to compare notes and practices. All fixers are encouraged to adopt the same methods and settings to assure consistent results. Parts are replaced on looms as found necessary during regular fixing and inspection.

All substandard cloth found in the examining department is shown to weavers and fixers and foremen involved. A red slip is put on the offending loom to indicate the defect so all shifts may quickly note the difficulty.

All loom settings are checked. Special emphasis is placed on correct boxing of shuttle, picking, and transfer motions. These parts are most important on automatic looms. Fixers are reminded constantly that automatic looms are not automatic unless the settings are correct to permit continuous operation.

Good warps start with good winding in this plant, especially on silk. Emphasis is on uniformly sized bobbins. Also essential are correctly tied and clipped knots with tails about one-eighth inch long and not over one-fourth inch.

The silk system equipment is properly maintained by experienced personnel to produce characteristic good work on this type of goods. Uniformity of tension rather than amount is held important; however, light tensions are favored and maintained at about 1/10 of a gram per denier at the warpers and ¼ gram per denier at quilling.

On warpers, all bobbins are kept to the same physical dimensions with the same amount of yarn on each bobbin to assure even work and runout. Also, felt washers of various sizes are used to obtain uniform tension which is checked by tensiometer.

An experienced warper can set up a run in a minimum of time by using the procedure employed here. Smooth starts and stops are important and are assured by good drive maintenance and operator caution.

Soap, individual hand towels, and powder bags are provided to everyone throughout the plant to keep hands clean for handling yarn and fabrics.

Posters and bulletin boards are used extensively to remind employees to keep hands and work clean. A poster on each loom asks: "ARE YOUR HANDS CLEAN?"

Fixers, porters, and warp hangers are furnished five sets of white coveralls (the plant has these laundered) and management insists that the personnel change them frequently.

Quick way to test fuzz and pill tendency of carpets

■ Because floor testing to determine the fuzzing or pilling tendency of a carpet requires such a great amount of time, personnel of E. I. du Pont de Nemours & Co., Inc., developed a laboratory method that can be used to predict this tendency in a very short time.

The method, which is completely described in the company's Bulletin N-87, consists of tumbling carpet squares in an unheated home-type clothes dryer with a number of rubber strips and balls of fabric which act as abradants. The fabric balls also supply a small amount of fine lint. During tumbling, pills are produced on the carpet squares that resemble those produced in actual service, the company states.

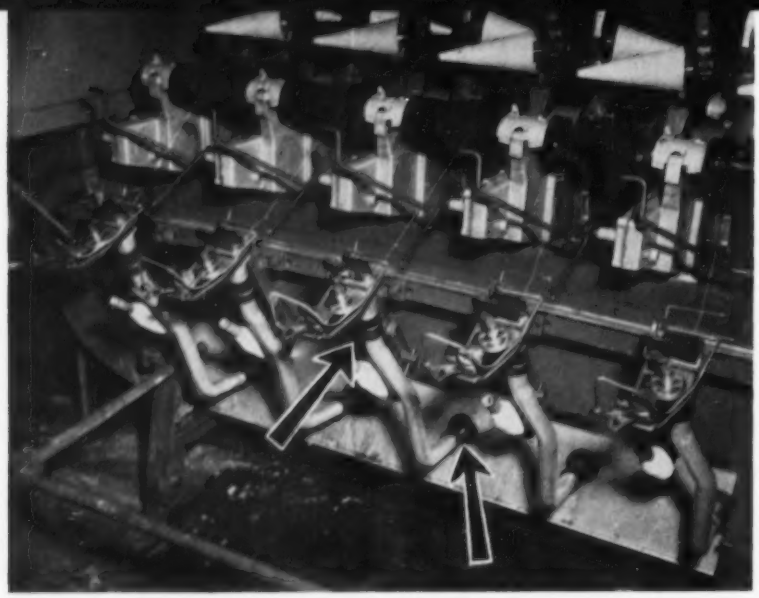
Ten hours in the tumble tester has been accepted as approximately the equivalent of a 32,000 traffic level in floor testing. At the end of the tumbling period, samples are removed and evaluated subjectively by several persons.

According to Du Pont, good correlation has been obtained between laboratory tests and actual floor service, both in degree of pilling and in the appearance of the pills and fuzz.

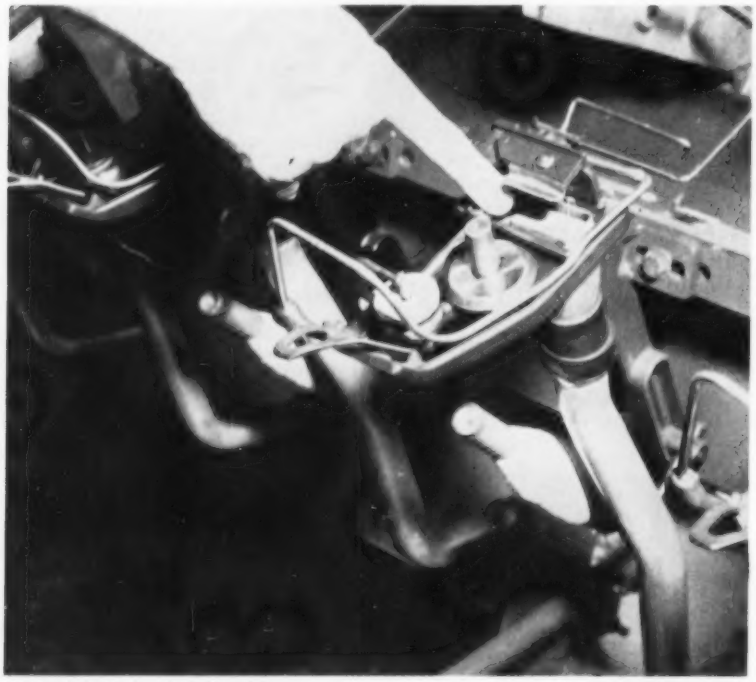
Vacuum

Staff prepared

Exclusive



The heads are connected to the tributary tubes by rubber unions, which also are used to connect the tributary tubes to the central duct (arrows).



The anvil in the head divides the opening to provide two slots or orifices through which the air is drawn into the collector tubes. The comb is raised in this photo.

Should it become necessary to remove it for cleaning, the head is easily taken off.

FOUR WINDERS, each having 100 spindles, are equipped with vacuum slub catchers at Piedmont Mills, Inc., Gastonia, N. C., and production has increased 15-20 per cent as a direct result of the installations. These winders produce more than those without the vacuum units, all other factors being equal.

The vacuum action at the slub catchers helps keep the winders free of lint, thereby saving the operator's time which would otherwise be spent cleaning the winder and slub catcher after winding each bobbin. Better and more uniform yarn is made, working conditions are improved, and lower grade leaf cotton may be used in some instances.

Yarn wound on these machines is 15 per cent more uniform than formerly, as measured on a Uster tester; and the yarn produces a better quality fabric, according to Sam Planer, president of Piedmont.

Tests conducted on the vacuum-slubbed yarn revealed that in producing a 40-lb roll of knitted fabric, the knitting machine stopped only once or twice from yarn slubs or from lint on the yarns. Before the installation of the vacuum system the stops from such causes ran from 10 to 15 in the same fabric length.

Based on machine production the vacuum slub catchers remove about 0.5% waste. The waste is classified as good clearer waste which is worth from 8 to 10 cents a pound compared to 2 to 3 cents a pound for floor sweeps. The device pays for itself in six months, based on maximum production on three shifts, five days a week.

Mechanically picked cotton contains more leaf and trash than

slub catchers up winder output 15%

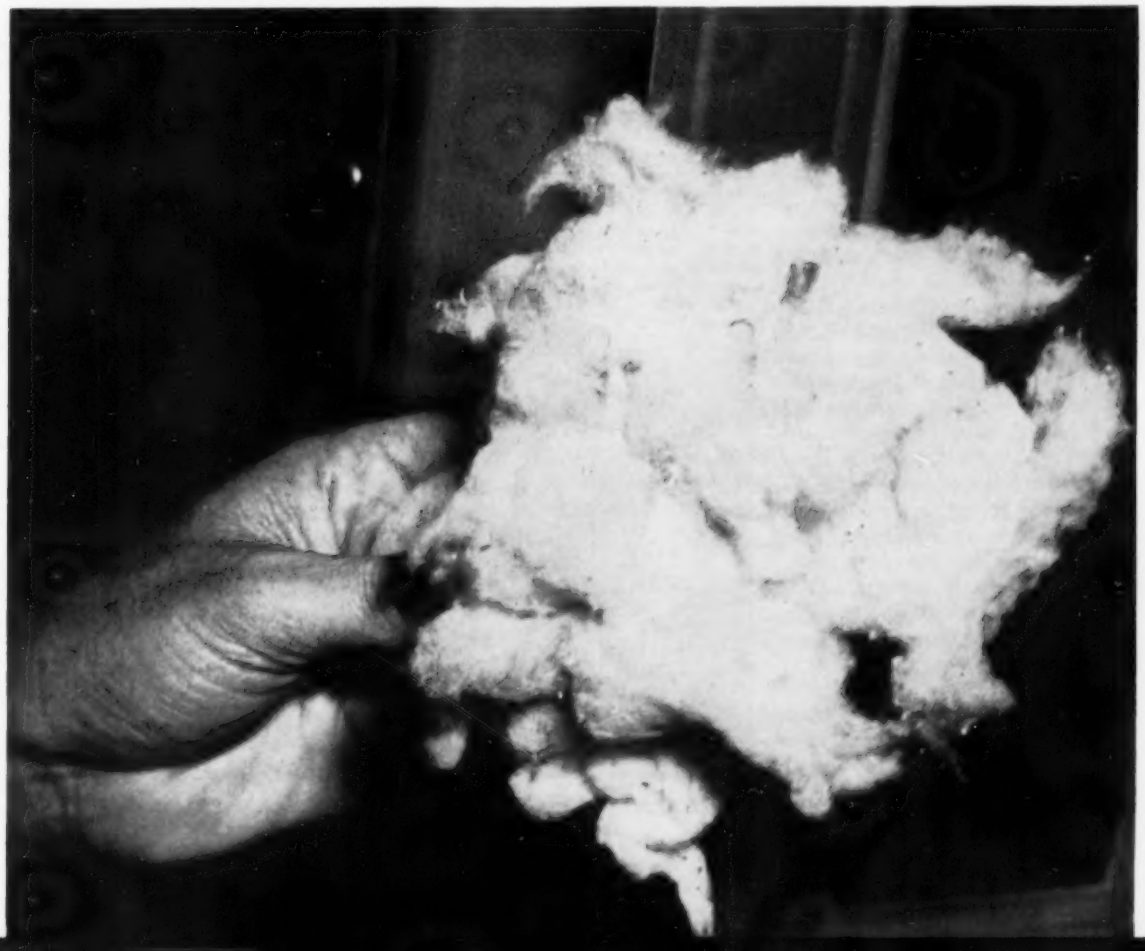
hand picked cotton; and since mechanically picked cotton is becoming more prevalent in the market, the vacuum device on winders has been found especially helpful in removing foreign matter after spinning.

A vacuum slub catcher was found desirable to help keep slub catchers clean and at the correct setting while still maintaining maximum production from the winders, which run at 500 yards per minute. The operators usually tend 50 spindles or one side of a winder in this mill.

Before the vacuum units were installed, slub catchers were sometimes raised slightly to prevent breakbacks. If slub catchers were left to the correct settings, lint would build up at the anvil under the comb and at the blade, subsequently causing breakbacks,

The waste is removed from the fan enclosure about once every shift. Note the similarity of the fan unit to those used on spinning frames.

The waste removed by the vacuum system is classified as good clearer waste, and as such brings a higher price than do sweeps.



lower production, and higher costs.

One operator can now run 75 spindles instead of 50 on numbers finer than 30/1 because of the reduction in the amount of cleaning required on the machine as well as the slub catchers. This mill makes 2½-pound cones wound from three to five ounce bobbins. Knitting yarns are produced for the jersey and ribbed cloth underwear trade. The yarns are used primarily in fine gauge 22-cut jersey and 14-cut ribbed fabrics which require uniform and gout-free yarns. Other processes at this mill include opening, picking, carding, combing, and spinning.

Two Foster No. 102 winders have been in operation for about two years while equipped with the vacuum units; and two Universal No. 44 winders have been equipped and operating for about one year. The vacuum units are operated by 1½ hp motors. Power consumption is negligible. Air around the winders is kept free of lint, thereby maintaining more comfortable conditions for the operators.

A fan unit built by Parks-Cramer Co. provides the vacuum through a central collection duct fitted onto the guard rail brackets. Tributary tubes connect the central duct to the slub catcher heads.

Each head is located immediately below the slub catcher comb, and each head contains an anvil which divides the carrier opening to provide two orifices through which the vacuum draws slubs and lint. The collector head which contains the fan unit is similar to SpinSaVac heads used on spinning.

The assemblies require little attention, and lint is removed from the fan unit about once every shift on 26s to 30s yarns. Experience has shown especially good results in removing shorter fibered cotton from the slub catchers. The motor for the vacuum fan is enclosed and greased for life, excluding any routine maintenance.

Labelled the Renalp Process Cleaning Device, the units were developed at Piedmont Mills, and are made by Parks-Cramer.

Now's the time to give your boilers the once-over

■ Most maintenance men consider the summer months as the ideal time for general boiler maintenance. Ample time is then available to assure that the boiler is properly prepared for operation during the coming heavy-load season, thus eliminating the possibility of serious shutdown due to improper maintenance.

According to engineers of Thomas C. Wilson, Inc., this summer once-over will often turn up minor leaks and malfunctions that can be quickly and easily taken care of before they become serious.

Operations accomplished during this annual check-up may consist of cleaning, tightening, and, where necessary, replacing tubes, the inspection of valves, gauges, and refractory, and cleaning and inspection of other boiler fixtures. In many plants, maintenance of tubes has proven to be the major portion of the annual spring or summer check-up.

A number of tools are available that will make this job much easier to perform. In addition, these tools will assure that the job, once performed, has been done properly.

Tube cleaners are said to be ideal for the removal of scale or other fouling material from boiler tubes because they do a thorough job of cleaning in the shortest possible time. Various accessories may be employed, such as cutter heads and expanding brushes, depending on the type and extent of scaling. In addition, scratch brushing of drum surfaces and handholes may be accomplished by certain adaptations of these cleaning tools.

Where return tubular sections are encountered, such as economizers and superheaters, universal expanding brushes can be used with standard tube cleaners. These devices can negotiate bends and provide the required thorough cleaning.

Air preheaters, if properly maintained, are easily cleaned of their normal light deposits; however, these units more often than not are overlooked for several years. Considerable scale may then be encountered, requiring the use of drill-type cleaners with their scavenging air or water jet.

During the inspection and cleaning process, a thorough analysis of the serviceability of the boiler tubes should be made. Tube replacement or rerolling of leakers is easily accomplished by the use of tube expanders, Wilson engineers said. Modern expanders are usually furnished with square shank mandrels and are self-feeding by means of clock-wise rotation. Expanders may be rotated manually or by an air or an electric motor.

Where tubes are to be rolled through headers or similar confined areas, a wide choice of accessories is available. The exact selection will, of course, depend on the relative position of a tube to a handhole.

Expansion control is very important in boiler-tube expanding. Under-rolling causes too loose a joint, while over-rolling may cause the joint to fail in service. The tool being used here measures torque directly at the mandrel and stops rotation of the expander when the preset torque is reached. It is simply adjusted through a dial calibrated in foot-pounds of torque.

Courtesy Thomas C. Wilson, Inc.

TEXTILE FAILURES

What caused them and how they could have been prevented

by James J. Etro

Dun & Bradstreet, Inc.

Exclusive

IN 1956, 9,893 out of every 10,000 operating manufacturers of textiles *did not* fail, according to a recent study of Dun & Bradstreet, Inc. The 107 out of every 10,000 who *did* fail represented the sixth highest failure rate among the 14 general manufacturing lines for which rates were computed.

These failure rates are computed annually so that one industry can be compared to other industries and also to the national average for all manufacturers. To obtain this failure rate, Dun & Bradstreet computes how many concerns fail out of each 10,000 operating in a line.

The national average rate of failure for all manufacturers in 1956 was 79 per 10,000 operating concerns. Therefore the failure rate of 107 for textile manufacturers would indicate that the industry is not better off than the average manufacturer—but a lot better off than manufacturers in some other lines.

Here's how the textile manufacturing industry fits into the failure rate picture among the 14 selected manufacturing lines of trade ranked in the order of numbers of failures per 10,000 concerns during the 12 months ending January 1, 1957.

Line of Industry	Failure Rate Per 10,000 Concerns
Furniture	232
Leather and Shoes	175
Apparel	144
Electrical Machinery	143
Transportation Equipment	116
Textiles	**107**
Metals, Primary and Fabricated	87
Average—All Manufacturers	**79**
Machinery	69
Chemicals and Drugs	54
Food	44
Paper	42
Lumber	39
Printing and Publishing	31
Stone, Clay and Glass	30

Let us now look at the failure statistics for the industry in 1956. During 1956, 87 manufacturers of textiles failed, with a total loss to creditors of $10,432,000. Percentagewise, this represented an increase of 43 per cent in numbers as compared to 1955's reported 61 failures and an increase of 113 per cent as compared to 1955's reported creditors' losses of $4,904,000.

The 87 failures reported in 1956 represent the fourth highest number of failures for a year in the industry since 1940. Creditors' losses of $10,432,000 in 1956 represented the second highest annual losses for creditors in the industry in the same period. The average liability for each textile manufacturer who failed in 1956 was $119,908—an increase of 49 per cent as compared to the average liability per failure of $80,393 reported in 1955.

A further breakdown of the failure statistics for the various branches of the textile manufacturing industry for 1956 as compared to 1955 is given in *Table 1*.

It should be pointed out that Dun & Bradstreet's failure figures include only textile manufacturers who failed with losses to creditors. Not included in the tabulations are voluntary retirements from business, transfers of ownership, and those which closed their doors owing no bills. Therefore, the 87 textile manufacturers who failed in 1956 are not necessarily the only ones who ceased operations, but they were the ones who did so at the expense of someone else.

Causes for Failure. What is the cause of a business failure? Through the years, one pattern has consistently recurred in Dun & Bradstreet's studies into the

TABLE 1. Business Failures in the Textile Industry

	1956		1955	
	Number	Liabilities	Number	Liabilities
Cotton	1	$ 53,000	1	$ 70,000
Silk	1	90,000	4	300,000
Rayon	16	1,679,000	3	490,000
Wool	2	750,000	3	556,000
Knit Goods	27	1,686,000	24	1,288,000
Dyeing and Finishing	20	4,359,000	16	981,000
Carpets	6	335,000	3	495,000
Miscellaneous	14	1,480,000	7	724,000
	87	$10,432,000	61	$4,904,000

TABLE 2. Classification of Causes of Manufacturers' Business Failures in U. S., 1956

No.	Per Cent	Underlying Causes		Apparent Causes	No.	Per Cent
72	3.1	Neglect:	Due to	Bad Habits	12	0.5
				Poor Health	49	2.1
				Marital Difficulties	6	0.3
				Other	5	0.2
45	2.0	Fraud:	On the part of the principals, reflected by	Misleading Name	1	0.0
				False Financial Statement	6	0.3
				Premeditated Overbuy	2	0.1
				Irregular Disposal of Assets	31	1.4
				Other	5	0.2
221	9.7	Lack of Experience in the Line	Evidenced by inability to avoid conditions which resulted in:-	Inadequate Sales	1246	54.5
331	14.5	Lack of Managerial Experience		Heavy Operating Expenses	200	8.8
363	15.9	Unbalanced Experience *		Receivables Difficulties	270	11.8
1202	52.6	Incompetence		Inventory Difficulties	164	7.2
				Excessive Fixed Assets	209	9.1
				Poor Location	11	0.5
				Competitive Weakness	340	14.9
				Other	116	5.1
41	1.8	Disaster:	Some of these occurrences could have been provided against through insurance.	Fire	24	1.1
				Flood	7	0.3
				Burglary	1	0.0
				Employees' Fraud	3	0.1
				Strike	4	0.2
				Other	2	0.1
10	0.4	Reason Unknown				
2285	100.0	Total		*Because some failures are attributed to a combination of apparent causes, the totals of these columns exceed the totals of the corresponding columns on the left.*		

*Experience not well rounded in sales, finance, purchasing, and production on the part of an individual in case of a proprietorship, or of two or more partners or officers constituting a management unit.

Source: Dun & Bradstreet, Inc.; based on opinions of informed creditors and information in Dun & Bradstreet's credit reports.

TABLE 3. Failures in Textile Manufacturing 1940 - 1956

Year	Number	Liabilities
1940	140	$ 4,676,000
1941	81	1,976,000
1942	36	1,436,000
1943	6	1,292,000
1944	5	87,000
1945	2	93,000
1946	1	6,000
1947	18	1,939,000
1948	27	2,902,000
1949	71	6,170,000
1950	58	3,826,000
1951	54	3,232,000
1952	60	5,344,000
1953	88	10,906,000
1954	108	10,251,000
1955	61	4,904,000
1956	87	10,432,000

This record includes those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization, or arrangement; or voluntarily compromised with creditors.

Source: Dun & Bradstreet, Inc.

causes of bankruptcies involving losses to creditors. A failure can be traced in most instances to a clearly identifiable human weakness on the part of the people running the business. This human failure may be in judgment, personality, decision, or know-how.

In order to help all businessmen avoid the pitfalls which lead to failure, Dun & Bradstreet tries to get at the cause behind every business failure. To find out why the business failed, the Dun & Bradstreet reporter makes a final investigation when the failure is reported. When possible, he talks with the owner, partner, or corporate officer of the bankrupt business, and in addition checks with banks, suppliers, or other outside sources to form an objective opinion as to why the failure occurred.

The number of textile manufacturers who failed in 1956 is too small in itself to break down separately, but the study of the causes of failures among all manufacturers will indicate danger signals that operators of textile mills may use to check their operations. *Table 2* is the study of the causes of failures that Dun & Bradstreet, Inc., did on the 2,285 manufacturing failures, including textile manufacturers, for the year 1956.

The failures caused by neglect, fraud, and disaster account for only 6.9 per cent of all failures among manufacturers in 1956. Some of these failures probably could have been prevented through proper insurance. But even if you say that these failures were caused by circumstances beyond human control—"Acts of God"—they represent a relatively small part of the whole picture.

Dun and Bradstreet tried to get at the real cause of failure behind the other more than nine out of ten cases that could not be ex-

plained by obvious, outside circumstances. Here's the way the figures fell:

Incompetence	52.6%
Unbalanced experience	15.9
Lack of managerial experience	14.5
Lack of experience in the line	9.7
Total	92.7%

In other words, the bulk of the failures appeared to be management failures.

Although it is no part of Dun & Bradstreet's function to predict the future, it is reasonably safe to say that 1957 will bring to all industries problems to be solved and challenges to be met. A good long look at himself and his business never did any businessman harm, and if the underlying causes of failures in 1956 suggest areas of change or investigation, all well and good.

No matter what 1957 brings there is always room for the textile manufacturer who knows what he is doing and how to do it. Initial profits may be made by service, quality and the right location but only sound management policies and practices will hold on to those profits and build the business.

How a wet processing plant cut valve maintenance costs

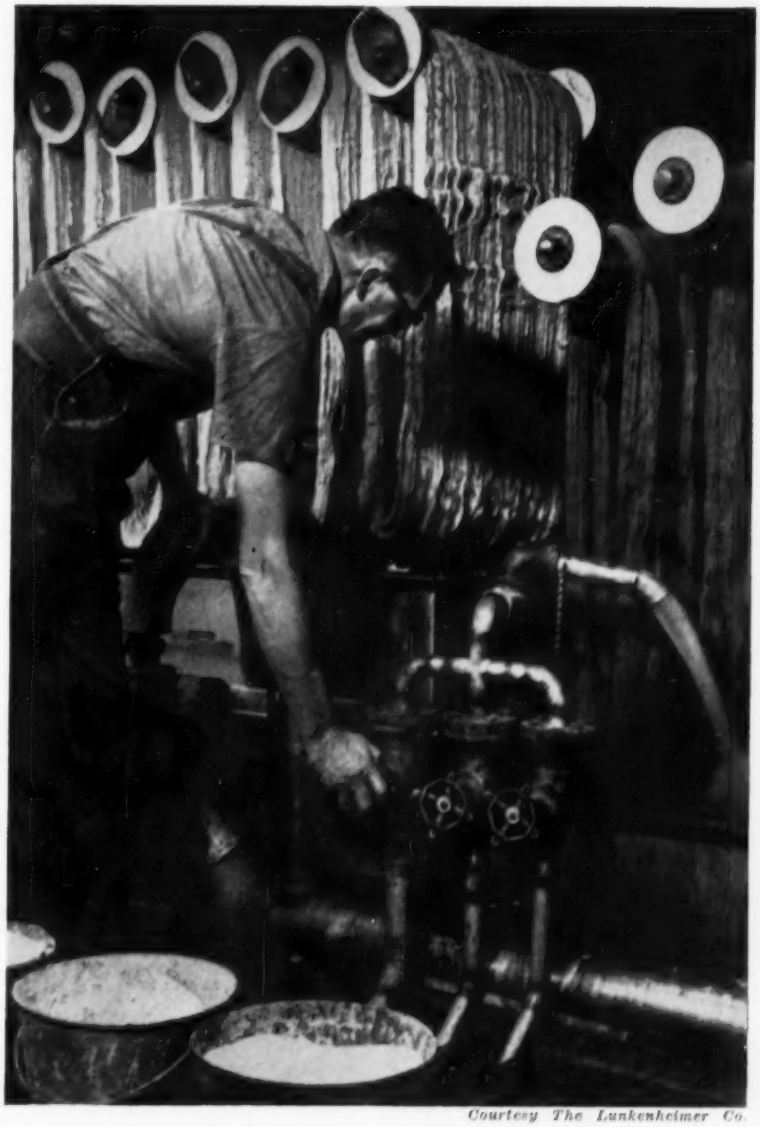
■ In the skein dyeing and washing operations at the Toccoa, Ga., thread finishing plant of Coats & Clark, Inc., control valves in the water lines are exposed to service which one manufacturer of them describes as especially severe. Being installed in hot, cold, and refrigerated water lines, they are throttled from closed to full-open up to 25 times a day.

Initially ordinary bronze valves were utilized in this application, but they frequently required repair. So plant engineers began to look for a solution to the problem.

According to The Lunkenheimer Co., decision was made to test one of the new LQ600 valves which are equipped with seats and discs of Brinalloy, a metal that is more resistant to wear than 500 Brinell stainless steel and actually outwears stainless steel exceeding 1000 Brinell hardness.

This test valve was installed over a year ago, the report stated, and because of its satisfactory performance additional LQ600 valves have been installed wherever possible. To date, not one seat or disc has needed replacement, and losses from leakage have been completely eliminated where these valves are utilized.

Because valve repairs have been eliminated, a considerable saving in maintenance costs has been realized as well as fewer production losses in all lines served by the new valves.



Courtesy The Lunkenheimer Co.

The nature of the picking operation, the combination of evener motions, beaters, screens, and drafts, all lend themselves to the production of uneven places in the finished lap. One of the most prevalent flaws in picker laps which the carder must minimize is the heavy section of the lap existing at the starting point of a new lap. The photo illustrates how not to start one.

Consider these ways to

PREVENT HEAVY LAP ENDS

by Konrad Chu

Exclusive

ANY LAP tested on a lap tester, however even it may be, will show some yards of heavier stock when the tail of the lap is reached. The heavier stock may run one yard or several yards, depending upon the construction of the machine and the method of working.

This is a well known fact so that in calculating the percentage variations of a lap, these heavier yards are often omitted.

Causes of the Heavier Yards. The cause for this heavier stock can be summarized into three points:

(1) When a picker is stopped for doffing, all the feed and delivery parts are stopped except the beater. The cotton in the beater compartment, when the machine is stopped, will still pass to the cages. But the latter have also stopped. Thus the cotton transferred from the beater to it will naturally increase its content as compared with normal running. This accounts for the heavier lap ends found.

When the machine is started again, the emerged stock, although first delivered from the picker, will be the last stock unwound on the card or lap tester. This is the reason why the heavier stock appeared in the last few yards of a lap.

The length of the heavier yards due to this cause varies with the construction of the picker. When there are two or more beaters between the calender rolls and the

hopper, and the cone drum is placed far back toward the hopper, more yards will be affected. On the contrary, when there is only one beater, and the cone drum is placed nearer the front only one yard or less will be affected.

(2) In the present construction of pickers, the weight of lap is controlled mainly by the cone drums. As we know the latter in turn is actuated through a pedal and its connecting levers and forks. When cotton stock passes between the pedal and the pedal roll, the pedal is depressed, the degree of which depends on the thickness of cotton stock passing over individual pedals.

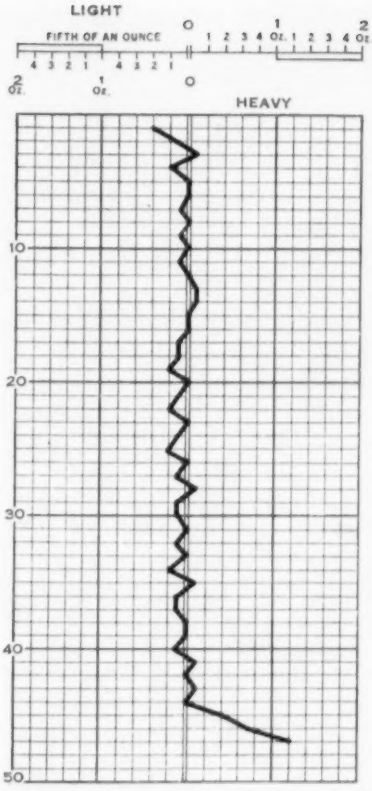
The depression of the pedal in its front causes the rise of its tail. This raises the fork and lever and the position of the cone belt on the evener drum. Thick stock raises the tail of the pedal more, thin stock less, and causes the pedal roll to run slower or faster respectively.

The cotton stock passes over the pedal in an open condition, since it has already been passed through a number of beaters. When the machine is stopped the weight of the pedal lever is heavy enough to bite deeper into the sheet of cotton than it does in ordinary running. This will speed up the cone drum, and produce a heavier lap section —the degree depends in part upon the down time.

(3) There is a tension draft between the fluted roller and the bottom calender roller. This tension draft is necessary in the making of a compact lap; and sometimes it is increased in order to avoid the troublesome lap ballooning.

The magnitude of the draft usually is 1.02—it may amount to as much as 1.12. This draft however will be fully realized only if the racks are firmly resting on the lap roller, since only then will the former give the necessary pressure to draft the stock.

When starting a new lap, the usual practice is to let the stock flow forward from the calender roll, over the fluted roll, insert the lap pin, fold back the leading edge of the stock, then lower the rack over the ends of the lap pin. Ten to twenty seconds elapse before the lap pin is pressed with the necessary force to effect tension draft between the calender roll and the fluted roll.



In the above lap meter chart the longitudinal lines represent one yard of picker lap. The final three yards at the bottom of the chart show the typical heavy end.

Assuming the lap weighs 14 ozs per yard, the fluted roll rotates at 8 yards per minute, the tension draft is 1.05, and the time for lowering down the racks is 15 seconds, then the length of lap run without draft is 2 yards. The weight of the lap will increase nearly 0.65 ozs per yard. This is another cause of the heavier lap section.

Importance of the Evenness of Lap. With the introduction of spinning with a reduced number of doublings, especially in the carding-to-spinning process, the evenness of the picker lap is—with regard to the count variations on the yarn—of great importance. So is this heavier lap section.

In order to eliminate this heavier tail, technicians have devised a number of means which work either solely for this aim or as a side effect of the other improvements.

The main methods adopted are the following:

*(1) Automatic doffing arrangement.** In pickers equipped with automatic doffing arrangements, the lap is doffed and removed automatically by supplementary mechanisms without at any time interrupting the delivery of the stock.

The operation of this arrangement can be summarized as such:

a. When a lap being made has reached its prescribed length, the racks begin to move upwards.

b. The fluted rolls on which the lap revolves are accelerated considerably so that the full lap breaks from the delivery of the stock.

c. The full lap is ejected into the lap cradle by an automatic mechanism. The cradle swings clear of the fluted lap roll.

d. The racks reverse their upward movement and begin to descend (the racks when reaching their upper position have taken with them a reserve lap pin from the storage position).

e. The reserve lap pin is put into the storage position by the operator during the formation of the lap.

f. The fluted roll resumes its normal speed and the stock flows forward over it.

g. The lap pin is dropped into position from the descending racks.

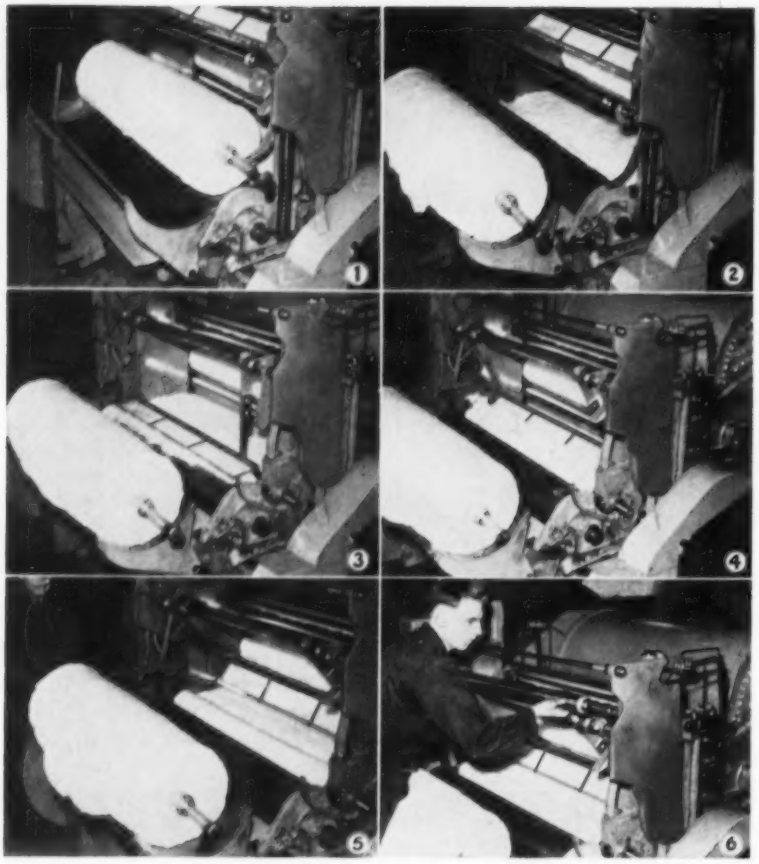
h. The forward edge of the stock is wrapped round the lap pin by a sweep.

i. The building of the lap proceeds.

One of the manufacturers has been saying that the above complete motions can be completed in approximately seven seconds.

With this arrangement, the first and second causes of the heavier stock at the tail of the laps can be removed. Since the machine does not stop the cage will not stop. There will be no extra stock passing from beater to cage; and again

*We are aware of only two manufacturers of automatic picker doffing systems. One is marketed by American Rieter Co., Inc., Passaic, N. J., and the other by Tweedales & Smalley Ltd., Castleton, Rochdale, England. The latter system is illustrated in a sequence of photographs elsewhere in this article.—The Editors.



How the Tweedales & Smalley automatic picker doffer operates is shown in these six photographs. Below is a description of the action pictured in each of them:

Photo 1. The completed lap is being discharged into the cradle. Hooks in the rack heads are ready to pick up the new lap pin from its storage position.

Photo 2. The cotton flows forward over the fluted lap rolls while the lap pin is carried downward by the racks.

Photo 3. The spring loaded sweep has moved into position ready to fold back the leading edge of the sheet of stock.

Photo 4. The sweep moves sharply backwards and folds in the leading edge of the sheet.

Photo 5. While the building of the new lap proceeds, the operator removes the lap pin from the lap just completed.

Photo 6. After removal, the lap pin is placed in its storage position ready for the next doffing cycle.

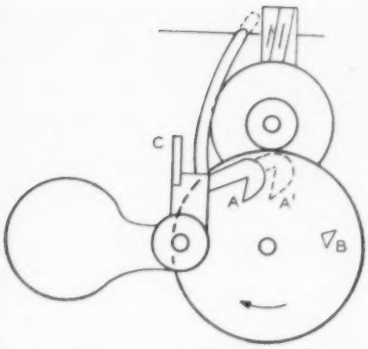
since the pedal roll will not stop, there will be no biting into cotton stock by the pedals. But the third cause—heavier stock due to lack of tension draft between fluted roller and the bottom calender roll —has not been solved.

(2) The evener clamp. This arrangement involves the use of an evener clamp attached to the throw-out clutch lever of the evener motion.

As the evener clutch is thrown out to stop the feed rolls, the clamp firmly positions the evener belt.

By using this arrangement, the second of the above causes can be eliminated. But still this is not a complete solution.

(3) Modification of working procedures. In some mills, in order to remedy the heavier stock due to lack of tension draft between the fluted rolls and the calender rolls,



In this diagram the knock-off motion stops the picker when the boss B strikes the hook A. Since the direction of rotation is clockwise for the boss, hook A effects picker stoppage when the finished lap length is reached. Then as the boss B progresses to hook A' on the new lap length, the picker again stops. But the operator is trained to stand by at this point and start the picker so quickly that only a thin place is made in the new lap. This marks the place where the lap is to be broken off at the card to prevent the heavy portion, produced in part by lack of pressure on the lap pin, from being carded.

a new working method has been introduced. By this method, the tender before starting the delivery of the stock, lowers the racks into their working position. The stock, when delivered from the bottom calender roll is put under the lap pin by the guide of the sweep, and when emerged from under the lap pin, it is again folded over the latter by the sweep as usual.

This method differs from the ordinary method of letting the stock be delivered over the fluted roll first and then lowering the racks. It may cause much inconvenience to the tender when first changed, but it does make the length of heavier stock shorter. So it is highly recommended to the ordinary mill not equipped with the automatic doffing arrangement. Furthermore it involves little expense of changeover.

The above three methods have not solved the problems completely. All are deficient in one way or another.

The one from the author's point of view most applicable and one which does solve the problem—especially with the present use of large-package laps—is that of putting on another hook in the knocking off motion as shown in the accompanying sketch.

Two hooks A, A' are placed

parallel with each other, but A' is a little shorter than A. So A' is a little farther away from the knocking off pin B (viewed in the direction of the arrow). Thus the pin B will raise the hook A first when the length of the lap has been reached, and causes the drop lever C to drop. This stops the machine. When the lap has been doffed and the machine started, the pin B in moving further forward encounters hook A', the pin will stop the picker just as it does for doffing. But the tender is so trained that he will instantly start the machine. The stock is broken during the interval the lever is down; but since the interval is kept so short, it will continue to wrap on the lap pin without requiring piecing. The broken length may be a quarter, half, or one yard. This broken tail can be taken off as waste in the card room when the lap is used up. Thus the heavier tail of the stock will not be made into sliver.

With the introduction of the large-package laps, the amount of this lap-end waste may be negligible, since it may amount only to one-half of one per cent. But the contributions to yarn evenness is significant.

Survey reveals trend in fabrics and fibers for passenger cars

Extract*

■ In 1950 the Market Development Branch of Agricultural Marketing Service made an extensive survey of fabrics and fibers for passenger cars. In 1955, it repeated the study. Not only were comparisons made, but future trends were appraised.

Researchers primarily were interested in finding out what the key automotive executives considered the characteristics of an "ideal" fabric for each part of the car. They wanted to know why these people preferred certain fabrics over others—taking into consideration style, cost, and serviceability.

Overall statistics for the two survey years show that 55 per cent of all upholstery and padding materials used in 1955 was cotton as compared with 62 per cent used in 1950.

However, when waste cotton in seat padding is excluded, cotton accounted for considerably more in 1955 than in 1950—43 per cent compared to 38 per cent. So, while the total amount of cotton used in car interiors has decreased, the use of non-waste cotton actually increased. AMS researchers feel these figures will show some increase in the immediate future.

Executives from the five largest automotive companies made valuable suggestions on how the cotton industry could even better the present position of its product.

They suggested that soil resistance, cleanability, wearing qualities, and appearance of cotton for upholstery and sidewalls be improved. Where cotton is used for headlining (ceilings of car interiors), greater flexibility in the installation of the fabric is needed. It should also be more soil resistant as well as easier to clean.

Regarding the use of cotton in convertible tops, executives want good color permanency, color range, and smart designs and colors on the interior side of cotton tops. Again, cleanability and durability rated consideration.

Cotton is used in combination with many of the other fibers. In nylon blends, which today are extremely popular for upholstery, cotton figures as the principal filler. It also is used for blending with other synthetics and as backing for vinyls.

The trend toward extensive use of cotton-backed vinyls for sidewalls will give cotton a further boost. However, the vinyls are expected to make inroads in the headlinings of automobiles—an area in which cotton has been used exclusively.

During 1955, cotton poundage in car interiors rose to 210 million pounds. Wool, which in 1950 amounted to 33 million pounds, dropped to 1 million pounds in 1955. In fact, excluding that used in padding, wool went from 38 per cent to a scant 1 per cent of the materials used.

Some wool will continue to be used, but primarily in blends for upholstering higher priced cars.

Nylon, on the other hand, likely will enjoy substantial growth as an upholstery material. Its blends are being used more and more in low- and medium-priced cars.

The amount of nylon used in automobile interiors has almost doubled in the last five years.

Along with nylon, vinyl has also become popular as interior trimming. Auto manufacturers used over 45 million pounds of vinyl for trim in 1955. Excluding padding, vinyl ranks second only to cotton.

Its favorable price makes vinyl especially suitable as a seat covering in lowest priced models and in some specialty models. However, its lack of porosity will probably cause it to lose ground to other synthetics in the low- and medium-priced field.

Because of this, vinyl probably will suffer an immediate reduction in use as an upholstery material. This will be followed by a leveling of period, with vinyl then holding a fairly stable position.

For sidewalls, vinyl is expected to increase in use, and perforated cotton-backed vinyl should become more widely used in headlining. Its future possibilities as a ceiling material, however, will depend on the success or failure of preformed, snap-in units.

For the future, automotive engineers see the continued use of colorful interior trim fabrics. Light shades will be used much less, with colors tending to be brighter and more intense.

Almost all of the fabrics will have unusual styling. Large nongeometric patterns, modern or abstract, will predominate.

*From the article "Fabrics and Fibers for Passenger Cars," by Milton Jacobs, which appeared in *Agricultural Marketing* for March, 1957.

How management in one plant "discovered" some elusive causes giving

Defect patterns in woven

by Marcus C. Gross

Exclusive

PROGRESSIVE mills today know the value of broadening the knowledge of their line supervisors in their over-all drive for quality by taking as their axiom, "Quality in every department is everyone's business." Today, more than ever, quality is everyone's business.

Perhaps there is nothing more baffling than to see a defect in the cloth and to have only a faint idea as to the original trouble source. It is comparatively easy to recognize a broken pick or mispick at a glance, and to pinpoint the trouble zone immediately (such as the loom and the weaver); but when a defect pattern appears that seldom if ever showed up before, then the concentrated efforts of every supervisor, from picking through weaving, should be employed to trace and eliminate the quality defect.

In one large mill, where cloth inspection by all overseers is a daily must, and intermittent inspections by all second hands also is a scheduled event, the cloth room overseer daily points out the defects in selected cuts of cloth. Most defects are familiar and an intensification of the quality drive rapidly minimizes them.

But when an unfamiliar quality defect appears, all supervisors are immediately called into conference, or are gathered before the inspection perch to view the defect. This applies to all shifts.

The opinions of all present are encouraged and in most cases one or more supervisors will come up with what appears to be the probable answer. Tests to duplicate the defect are immediately put into operation and compared with the original defect.

If all agree it is the same, that defect becomes catalogued and, in addition, all employees on the machines where the defect can and has occurred are not only shown the defect in the cloth but also shown how it occurred. This is important.

Most defects in this mill, as in other mills, are known, but listed here are a few of the unusual defects which were definitely unknown at the time of occurrence, but which were quickly solved after a group discussion was held and tests run to reproduce the defect.

IN ONE INSTANCE, a defect appeared with heavy and light yarn cross sections, clearly visible in the cloth, which also showed a definite pattern. The repeat of the pattern was consistent.

It was quickly evident that it could not possibly be a weave room fault, and when the designer reported that the pattern of heavy and light cross sections together totaled and repeated every 1100", more or less, the possibility that it might be a spinning room fault was also eliminated.

Most supervisors agreed on one point: The fault lay in one of the rolls in the card room. The possibility of a defective gear was also taken into consideration. But where?

The cloth was filling-face.

In the spinning room we were producing 18s filling from 1.50 hank roving, or drafting 12.

In the card room we were making 1.50 hank roving from intermediate slubbers which were drafting 10.8. We were using 60-gr sliver (the equivalent of .1388 hank roving, obtained by dividing 60 into the constant 8.33).

With these figures to start on it was soon determined in spinning that one turn of the 1" front rolls would only deliver 3.14" of yarn, and 1" of roving fed would deliver only 12" of yarn. Hence spinning was eliminated.

The next step was the intermediate frames in the card room, and here the draft of 10.8, when multiplied by the spinning draft of 12, equaled approximately 130" of yarn delivered by the front rolls of the spinning frame for every inch of sliver fed at the intermediate frames. It was obvious at this point that the fault lay in the finisher drawing.

All gears were carefully checked and none was found defective. The next move was to consider the circumference of the rolls, plus the intermediate drafts in the draw.

The first roll diameter was 1¼" (circumference 3.93") but this roll was eliminated as the source of the trouble because the mathematical quantities involved did not come anywhere near 1100".

The next step was the next draft. The draft between the first and second rolls was 2.6. Here, for every inch delivered by the second roll, 2.6" were delivered by the first roll. The backward tracing of the draft at this point was: 2.6 x 10.8 x 12, or 337" for every inch delivered by the second roll of finisher drawing.

The diameter of the second roll was 1" (circumference 3.14). One turn of this roll traced through the spinning (3.14" x 2.6 x 10.8 x 12) equaled 1058". It was obvious that this was the trouble zone.

A careful inspection of both the top and bottom rolls, especially near the belts with overhead pulleys and drives, revealed tiny particles of a black gummy substance similar in appearance to that thrown off by belts and overhead pulleys when too much belt dressing is applied. No other prob-

able cause was visible.

Proceeding on the theory that any gummy substance on the rolls accumulating fibers could cause a similar defect, a deliberate test was made in which a little stock was stuck to the bottom roll to form a glob, and which would impart eccentricity to the top roll to simulate heavy and light sliver delivery for each full turn of the top roll.

The test was carefully followed through to the weave room, and when viewed in the cloth the pattern had the appearance of the original defect. The follow-up on the uncovering of this defect source was to tell and show every fixer and draw tender the original defect and the comparison test.

Seconds from this source completely disappeared. Perhaps of greater importance was the organized efforts of all concerned in tracing and eliminating this trouble spot.

A SOMEWHAT similar defect pattern that definitely makes the cloth a second, and which was easily traced to the spinning room because of the repeated length of the pattern, is the defect that shows heavy and light cross sections of yarn approximately every 3″ apart. This pattern was made at the front roll of the spinning frames.

It was caused by a foreign substance in one of the flutes of the rolls (and this can be caused by a drop of oil). Fibers adhered to it until a wedge formed that soon imparted eccentricity to the top rolls similar to that as the finisher draw defect.

One of the follow-ups to eliminate this defect was periodic inspection, by the section hands, of all top rolls (semi-weekly) and careful observation of all front bottom rolls. Any erratic or eccentric rotation of the rolls was immediately checked.

In addition, all oilers were carefully re-instructed that when oiling the necks, arbors and joints of rolls, not to get any oil on the bosses of the top rolls or into the flutes of the bottom rolls. Roll pickers using the pneumatic cleaners were cautioned to clean the rolls before oiling and not immediately after. This defect soon became a rarity.

PRACTICALLY all mill men are familiar with one of the most common defects — one which a consistent and sustained drive is maintained to prevent — slubs.

Slubs, however, seldom appear in a pattern form. They are usually dispersed at random throughout the cloth. When they do appear in a pattern form, not as a repeat, but as the same type and likeness peppered throughout the cloth, the fault can well be construed as a defect of major proportions.

During the regular daily cloth inspection period, the overseer of the cloth room produced a cut of cloth which contained small clean slubs, dominant throughout most of the cut. Nothing like it ever was encountered before here.

Many possible sources were mentioned and discussed, and all were discarded because of two factors: The slubs were small, some almost tiny; and all the slubs were clean which eliminated such sources as flying lint and poor frame cleaning.

In re-examining the cloth it was found that the slub pattern was contained in individual bobbins of yarn; that is, from bobbin start to bobbin transfer. The superintendent ordered the cut burled (inspected); and many of the slubs were gathered up and taken to the conference room for further inspection.

Here again, the importance of group conferences on defects cannot be over-emphasized—it was a card room supervisor that advanced the theory that soon solved the problem. Carefully examining one slub at a time, he soon proved that the slubs had

very little staple; and from the fact that the slubs were clean he expressed the opinion that the trouble source was comber noil that somehow was getting into the sliver. When it was agreed that the comber noil was the probable source an inspection of all combers was immediately ordered.

The on-the-spot investigation revealed a few aspirators, or condensers, fouled up, with the noil backing up. It was easy to visualize what had occurred: With the backed or piled-up noil, the brush, practically in the same motion as it cleaned the half lap, was picking up noil and throwing it into the combed fibers. Top combs were found with needles missing.

Naturally, the fault was one of neglect, and corrective measures were taken at once, with daily periodic inspections on all shifts. A test was made in which noil was deliberately tossed into the combed fibers, and the resultant drafts in the draw, intermediates, and spinning (where there was no further cleaning of the stock) resulted in the self-same pattern that occurred in the original inspected cut containing this defect. No further trouble from this source showed up.

Naturally, these are unusual quality defects, but they happened, and what happened here can very well occur in other mills. The point is, that when they do occur, it should be "everyone's business" to trace and eliminate them and to insure that they will not occur again.

Most quality problems are usually threshed out on the first shift, with other shifts following through on the recommendations or prescribed orders. However, the supervisors of the second shift, for an extensive period of time, held what was known as a "Quality Jam Session."

Once a week, for an hour's duration, they would meet in the conference room where current predominant defects would be discussed. Usually the night superintendent would arrange the topic (or defect to be discussed) in advance, and would notify the department supervisor where the defect originated. This supervisor would come prepared for the subject and to answer questions submitted to him.

The value of these sessions was further enhanced because a mimeographed report of what was said and discussed was sent to every supervisor in the division. The jam sessions produced some valuable information, if not always vital information.

AT ONE of these sessions a weave room supervisor was asked why there were more broken picks on a certain style than on other styles. Specifically, he was asked the following questions: (a) Does the loom stop when the filling breaks, and if not, why? (b) Does the weaver find the right pick and remove the broken pick from the open shed, or does he just start the loom up again without bothering to do so?

One of the most important factors in any quality drive is the conference of supervisors for trouble shooting cloth defects

These questions were timely because this particular style always had a fairly high incidence of broken picks, mispicks, and what was listed as head skips from dobby looms. Incidentally, this was the mill's highest productive style.

However, these faults were all grouped together in a percentage total of seconds, and no particular effort had been made previously to isolate them into individual faults and separate percentages. The quality control department was charged eventually with conducting tests and time studies on this style, and their analyses indicated that broken picks was the chief fault.

But the answer that came from the weave room supervisor was that many of the broken picks visible in the cloth came from "live twist" when the filling broke in the looms. This "live twist" caused the broken end from the bobbin to twirl sharply and catch on to the ends in the shed, and thus prevent the loom from knocking off.

This did not occur always, he said, but enough to prove a nuisance. Sometimes the weaver did not know a broken pick had occurred.

When this report reached the superintendent's desk an immediate investigation revealed that the construction sheet called for a 4.00 multiplier in the filling, whereas all other styles had no higher than a 3.50 multiplier listed for the filling.

How or why the 4.00 multiplier was determined for this particular style no one knew. The style had been running for many years.

Accordingly a test run was ordered with a 3.50 multiplier in the filling and a special set of looms was set aside to weave it. This set was under constant study for a considerable period of time; and the results clearly indicated, percentage-wise, a marked drop in seconds from this particular fault.

Another factor involved was the increased production in the spinning room when the 3.50 multiplier replaced the 4.00 multiplier. The tremendous gain can readily be seen because this style averaged well over 100,000 yards of cloth woven each week.

Defects, unfortunately, will probably always be with us, and the drive for the highest quality possible will be greatly intensified in the foreseeable future. But, foreseeable future or not, quality drives should always be constantly maintained, and a catalogued record of all known defects, and their sources, should be on file readily available.

Yet, as in this progressive mill, one of the most important factors in any successful quality drive, is the group conference of all supervisors on quality—how to maintain it and keep it at a high standard. And finally, tell and show the employees that they too have a high stake in quality.

Participants in the Conference, l-r: J. Marshall Cole, president, National Association of Finishers of Textile Fabrics; W. E. Clark, vice-president and general manager, textile division, U. S. Rubber Co.; O. V. Wells, Administrator, Agricultural Marketing Service, USDA; and John Walsh, senior associate, Arthur D. Little, Inc.

C. A. Cannon, president, Cannon Mills, told the luncheon session of the Conference that the price of cotton is too high for all-out competition with synthetics.

Can textile markets be expanded?

If so, what is the role of market research?

Staff report

THE NATIONAL Cotton Council sponsored a Textile Market Research Conference, the first of its kind in the industry, on May 28-29, in New York City, which focused attention on the need for expanding markets for all textiles.

In his welcoming address, Wm. Rhea Blake, executive vice-president, pointed out that while the Cotton Council's market research program is concentrated on increasing cotton's share of the existing market, the program up to now has not been concerned with increasing the total size of this market. In this latter respect, Mr. Blake stated, "Cotton does have common cause with its competitors." And in a statement that set the theme of the conference, Mr. Blake asked, "But if the tools of market research can help build a sound basis for increasing cotton's share of existing markets, why can't they also be used to find out how we might increase the consumption of textiles as a whole?"

To learn of formal market research programs carried out successfully, the conferees heard papers on techniques used effectively in other fields, among them the automobile, aluminum, and chemical industries, in supplying management with essential data in the development of new products and conversion of existing products for larger markets.

On the second day of the conference, speakers dealt more pertinently with the problems that affect the textile industry, which has been losing its share of the consumer dollar to more dynamic and aggressive industries.

Dilman M. K. Smith, vice-president of Opinion Research Corp., in his paper, "The Psychology of Consumer Acceptance," stated that "the textile industry as a whole is the last major industry that is a hold-out on the utilization of modern market research techniques." He called for an integration of all market research techniques: collection of basic market figures so that the industry understands who buys its products, where and when; continuing in-use satisfaction studies; the use of motivation research so that the in-

F. E. Grier, president, Abney Mills, was general chairman of the Conference.

Luncheon session was addressed by Harry C. Mills, vice-president, J. C. Penney Co.

dustry knows what brings people into the market; and the pretesting of new design ideas for consumer and industrial products long before they are actually placed on the market.

Mr. Smith said that while it is impractical to attempt to pretest the acceptance of an individual item in some segments of the textile industry, as in ready-to-wear clothing, certain basic problems could be resolved to prevent losses in producing unprofitable items.

He outlined five areas of inquiry for initial research effort in clothing, domestics, and home decorative merchandise:

1. An understanding of long-term trends.
2. Shortening of lines, or numbers, or assortments.
3. Understanding the types and ranges of styles that are acceptable in different price ranges in various geographic areas of the country.
4. Understanding the life span of the top-selling items.
5. Establishment of orderly and systematic arrangements for pretesting the in-use satisfaction of new fabrics.

In concluding, Mr. Smith stated, "Trial and error methods of trying to determine what the customers want is too costly in today's fast-moving economy. Sound management of the future, in the textile field, will devote as much time trying to understand how people respond to product appeals as management now does to the technology of producing goods."

Frank McCord, market research director for the Cotton Council, who followed, analyzed the Council's market research program for the raw cotton industry, reporting that each of cotton's 418 principal uses is evaluated in four ways: on the basis of quantity, quality, price, and promotability.

The quantity data tell the size of the cotton market, the strength of its competition, and what trends are affecting its size. These figures, in turn, point up the potentials for increasing cotton consumption.

In respect to quality, Mr. McCord said 45 consumer qualities have been evaluated separately in terms of markets in which these qualities are significant and in terms of gain potentials for cotton through specific quality improvements. He cited that further improvements in shrink resistance, in which quality cotton excels most competitors, would not necessarily strengthen its position or capture larger markets. However, imparting the quality of slipperiness to cotton might enable it to compete for the coat and suit lining market which reaches into millions of yards.

In regard to price, Mr. McCord said that it would continue its downward trend as improvements in production efficiency were made; and in the long run, its price reduction would discourage competition.

Market research provides the tool for measuring the relative sensitivity of cotton's uses to promotional stimulation, Mr. McCord went on. Cotton responds best to promotion in those uses where personal taste and desires are key factors in making sales, as in dresses. Promotion of cotton is at its worst where sales are made, as in tire cord, strictly on the basis of price and specifications.

M. K. Horne, Jr., chief economist of the Cotton Council, in a paper entitled, "The Shifting Emphasis of Cotton's Competition," stated that domestic cotton consumption, now at 9 million bales annually, would have reached 12 million bales if it had kept pace with consumer spending. Of the 3 million-bale difference, he said that 800,000 bales went to other textile fibers; the drop in exports took about 600,000 bales; losses to paper, plastics and other nontextile materials accounted for nearly a million bales; and the remaining 700,000 bales represented a loss to other competition for the consumer dollar.

In addition to nontextile materials as a source of continuing and potential competition, Dr. Horne cited technological changes, and as examples he listed improved heating and mechanization, which have reduced the need for certain items of clothing.

In concluding, Dr. Horne stated that cotton consumption has trended downward because of competition that has forced its way into cotton markets "by the force of huge investments in research and sales promotion."

C. A. Cannon, president, Cannon Mills, chairman of the luncheon session, commented on the unfavorable price situation in the cotton industry, saying that "if we do not get a new farm bill, Agriculture Secretary Benson can do nothing but increase the price of cotton," which is already too high for all-out competition with synthetic fibers.

Harry C. Mills, merchandising vice-president, J. C. Penney Co., and luncheon speaker, proposed a three-point program to expand cotton textile markets. He urged lower, more competitive fiber prices; greater emphasis on "creative and imaginative styling that develops obsolescence;" and more intensive research and product development.

He also offered a four-point program that would keep textile volume at its present level and protect markets against further inroads by nontextile materials. The program outlined these steps to be taken by the industry:

1. Establish quality standards by which the consumer can know what she is getting for her money.
2. Establish industry control to prevent irresponsible statements on informative labels and in publicity and advertising.
3. Establish procedures to avoid product suicide through depreciation of quality.
4. Build merchandise from consumer point of view.

Climax of the conference was the afternoon session held on the last day in which a panel, representing the Cotton Council, held a general discussion on market research as a guide to developing and merchandising textiles and textile products. The panel included Ed Lipscomb, Director, Sales Promotion Division; Leonard Smith, Director, Utilization Research Division; M. K. Horne, Jr., Chief Economist; and Frank A. McCord, Director, Market Re-

(Continued on page 135)

Vat Printing at Eureka

is aided by oil-in-water emulsion thickener

Staff prepared Exclusive

WHILE many factors are involved in vat color printing, each requiring careful control, great importance is placed on the formulation and preparation of the thickener, for its role on the printing machine is a versatile one; and though it assumes a diminishing importance in subsequent operations, its presence on the fabric is significant.

Acting essentially as carrier for color and ingredients, it must be transferred to the fabric to form a sharply outlined film, evenly distributed, while withstanding the rather severe action of furnisher roll and doctor blade.

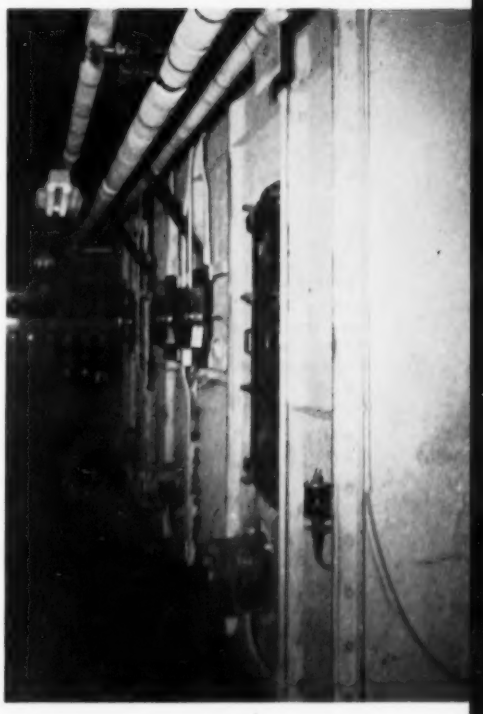
Its principal role in ageing perhaps is to confine the transfer of reduced color to the printed areas of the fabric. And in oxidation and soaping, where it is no longer of consequence, it must be removed for maximum development of color yield and fastness properties.

Development work and extensive plant trials over the years have resulted in the universal acceptance of starches, starch products, and natural gums, in various combinations, as the most suitable vat printing thickeners. By careful selection and control in preparation, the desired paste properties can be obtained to suit engraving, pattern, and fabric, with satisfactory running properties on the printing machine.

While many thickener combinations are possible, of which starch-British gum is perhaps the most typical, they possess some shortcomings inherent to starch when it is used in high concentrations. Possessing a chemical affinity similar to cellulose, it prevents the complete transfer of reduced color to the fabric in ageing; and being only partially soluble, it requires prolonged soaping or an enzyming for complete removal. If not removed, it is detrimental both to color value—which it masks because of its opacity—and to the application of resins in finishing.

To be sure, these shortcomings can be overcome or minimized, but they have nevertheless pointed to the need for new and improved thickeners that would facilitate the vat color printing operation. And in recent years attention has focused on the utilization of emulsion systems as thickening agents.

Oil-in-Water System. One such emulsion system, of the oil-in-water phase, has been recently evaluated and adopted by the Eureka Printing Co., Clifton, N. J. This development (U. S. Patent



Eureka Printing Co.'s high-production vat ageing equipment. Top: Two pieces entering the Proctor & Schwartz loop ager. Center: Lower section of ager. Bottom: Upper section of two-story ager. All vat work—discharge and application—is given a 10-minute ageing at a speed of 45 yd/min, to give a combined production rate of 90 yd/min.

Entering end of open soaping range, showing a discharge pattern printed with the oil-in-water emulsion paste. Vat prints are given a sodium perborate immersion and a brief skying, followed by soaping. One passage produces excellent whites, with a soft hand and minimum effect on ground shade.

2,597,281) can be utilized by the trade upon securing license from American Cyanamid Co., developers of the vat color emulsion printing system.

Eureka Printing Co. employs a variety of color classes, printing styles (including discharges), and pigment printing systems. Thus its color shop facilities and experience in handling emulsions, along with its modern vat ageing equipment, readily lend themselves to the new emulsion system.

Like the conventional vat printing paste, the emulsion contains the essential ingredients for color reduction. These are incorporated in the water phase along with emulsifiers and water-soluble gums which also act as emulsion stabilizers. The inner, or oil phase, contains only solvent, which in addition to the gum in the water phase, gives the emulsion its body. While no exact formulation can be given that will meet the varying requirements of a print works, the following pastes were used as starting points at Eureka Printing Co.:

	Standard Paste	Reduction Paste
Water, gal	5½	7½
Marasperse N (40%)*, gal	2	2
CMC HV 120 (4%)*, gal	10	10
Soda ash, lb	40	18
Sodium formaldehyde sulfoxylate, lb.	40	18
Sucrose, lb	20	20
Varsol No. 1 (or equivalent), gal	16½	19½
Total, gal	40	40

*Stock solutions to facilitate emulsion preparation

Preparing the Emulsion. The lignin sulfonate (Marasperse N) and carboxymethyl cellulose (CMC HV 120) are first dissolved in the water, after which the soda ash and sodium formaldehyde sulfoxylate are added. When these materials have dissolved, the Varsol is emulsified in, and the sucrose added to the complete emulsion.

On addition of the soda ash a rise in temperature occurs, reaching approximately 140 F; the emulsion must be cooled somewhat before the sodium formaldehyde sulfoxylate can be added. The prepared emulsion is mixed further to insure uniformity, and is then ready for the next steps in color preparation.

Throughout the entire emulsification, care must be taken to exclude air, to prevent oxidation of the sulfoxylate.

To produce stable emulsions in the presence of high concentrations of electrolytes at high pH value, specific emulsifiers are required. Sodium lignin sulfonate was selected because of its stability to electrolytes. It is used along with various water-soluble gums, in this case carboxymethyl cellulose, which act as emulsion stabilizers besides adding body to the paste. Early development work in emulsion formulation pointed to the use of sucrose as a humectant, since it was found to give better color yields.

In the final steps of color preparation, electrolytes are introduced into the emulsion by way of the dyestuffs, which contain special assistants to prevent particle agglomeration and settling upon storage. These assistants are not necessarily the same in each dyestuff paste and can vary among manufacturers. Certain of these assistants cause incompatability or emulsion breakdown due to the introduction of adverse electrolytes.

Printing. The low solids content of the emulsion paste—less than 1%—offers advantages in printing; improved linting properties, and rapid drying which prevents "mark-offs" on the drying cans are most notable. According to management at Eureka Printing, this quick-drying property can poten-

tially mean higher printing speeds. Since the emulsion is of the oil-in-water phase, blankets and print and furnisher rollers are readily washed down, requiring no solvent.

Viscosity of the emulsion paste can be adjusted readily to suit printing conditions. It can be thinned down by the addition of water containing alkali and sodium formaldehyde sulfoxylate in proper quantities. While theoretically an oil-in-water emulsion can be thickened by the addition of inner phase solvent or diluent, for practical purposes a small quantity of stock gum (such as carboxymethyl cellulose) is added.

Eureka Printing uses the emulsion paste, with modifications as required, in discharge and application printing in a full range of selected vats (used in conventional vat color printing), including a black of full strength.

Ageing, Developing, and Soaping. Ageing conditions and speeds have not been altered; ageing is still carried out for 10 minutes at a speed of 45 yards/minute. With Eureka's high production vat ager, two ends running give a combined output of 90 yards/minute with no possibility of a production bottleneck between printing and ageing.

To develop the colors, the prints are given a sodium perborate dip, followed by a brief skying and soaping. One passage through Eureka's open soaper is sufficient to remove the low amount of solids, leaving a soft fabric.

Advantages Over Conventional Thickeners. While the emulsion paste offers no appreciable cost advantage over conventional starch thickener combinations in formulation, its ease of preparation without use of heat make it economically attractive. Thus large quantities of paste can be quickly prepared to meet sudden changes in production scheduling.

Its greatest economies probably lie in final soaping and rinsing operations where one passage through an open soaper is sufficient to remove the thickener. This is particularly important in resin finishes which require calendering, where improperly soaped vat prints retaining some of the starch thickener are subject to marking-off.

Eureka Printing finds that a single open soaping is also an advantage in discharge printing, where diazotized and developed dyes are used, since there is little effect on the ground shades.

From an over-all standpoint, use of the emulsion thickener has facilitated the vat color printing operation, offering real and intangible advantages and presenting prints of excellent color yield.

How to give Arnel fabrics permanent antistatic properties

■ Development of a process that imparts permanent antistatic properties to "Arnel" triacetate fabrics has been announced by Celanese Corporation of America.

According to this man-made fiber producer, more than 5,000,000 yards of Arnel tricot, used largely in lingerie and women's outerwear, have already been treated commercially by this process which was developed in the Celanese textile applications and product development laboratories at Charlotte, N. C. While commercial application of the process so far has been limited to tricot, work is now underway to apply it to woven Arnel fabrics.

Dr. Reiner G. Stoll, director of the laboratories, said the process is a controlled alkaline treatment that creates a skin of cotton-like cellulose around each Arnel filament. This skin, constituting about 2% of the total fiber, is an integral part of the fiber and is not removed by washing or wearing.

Utilizing inexpensive chemicals, the process can be carried out with conventional dyeing and finishing equipment. It is applicable only to Arnel, Dr. Stoll stated, and will not work on other hydrophobic synthetics such as polyesters, acrylics, and nylon; total fabric static is reduced, however, when treated Arnel is blended with these fibers.

In addition to permanent antistatic properties, increased resistance to atmospheric fading, increased resistance to wet and dry crocking, and increased resistance to soiling are imparted to fabrics by the process, Celanese reported. Furthermore, the pleasing hand, dimensional stability, comfort, resistance to mussing, and general ease of care of untreated Arnel fabrics are retained or enhanced in fabrics given this treatment.

The Process. According to the announcement, the alkaline treatment consists of subjecting the tricot to a concentration of .3 to .7% sodium hydroxide. Typical operating conditions for Arnel tricot using the Burlington pressure beam dyer are:

> Fill unit with warm (100-120 F) water and run until there is a 2-3 lb pressure drop across the beam. Add 6 lb Triton X-100 and 6 lb Igepon T Gel. Circulate 5 minutes (inside-out flow). Add 35 lb caustic soda flake dissolved in water. Continue circulation. Raise temperature to 205 F as fast as possible (20-30 min. required). Run at 205 F for 30 minutes. Drop bath.
>
> Give a hot rinse (150 - 160 F) for 5-10 min. Drop bath.
>
> Give an overflow hot rinse for 5 - 10 minutes. Drop bath.
>
> Fill with cold water. Add 2 liters 56% acetic acid. Run 5 - 10 minutes cold. Drop bath.
>
> Start regular dyeing procedure.

Where the fabric is to be finished a bleached white, the alkaline treatment is carried out after bleaching to assist in the removal of residual peracetic acid. If the fabric is to be pressure dyed a light shade or given an optical bleach, the alkaline treatment is combined with the prescour.

Cost. Depending on batch size, fabric type and color, the process will cost from 2 to 4¢ per pound for tricot fabrics when the process is carried out on the Burlington pressure beam dyer, and about 4¢ per pound in the winch.

Lubrication is management's

Textile mill operators can reap the benefits of a good lubrication program if they are willing to participate fully in planning and carrying it out. Ways to go about it are given in this two-part article.

by L. E. Endsley, Jr.
Research and Technical Dept.
The Texas Co.
New York, N. Y.

Exclusive

As modern textile machinery has been developed to have more and more precision parts, the importance of good lubrication to protect such parts and insure their proper operation has also become of constantly increasing importance.

These parts are subject to wear unless furnished with suitable lubricants which are applied at proper intervals in correct amounts. The various lubrication needs of these points create a considerable problem. To handle such a problem requires that a carefully planned lubricating program be carried out.

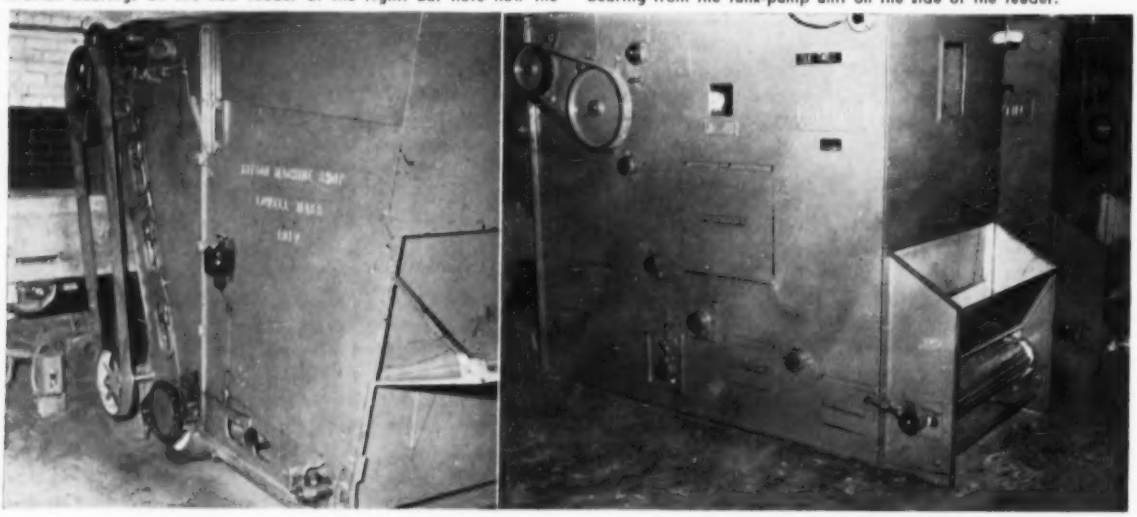
There can be no firm and continuing basis for such a lubricating program, however, unless those in the textile mill management who are concerned with the conception and execution of the program have a full appreciation of the benefits which will accrue therefrom. For example, the results and benefits in a textile mill of such a program, which might be more aptly entitled "A Wear Prevention Program," are outlined briefly in the accompanying chart.

Management Must Back Program. Textile mill operators can reap benefits from a good lubrication program if they are willing to participate fully in planning and carrying it out, and arrange to use the high quality lubricants specially developed for their needs.

The carrying out of such program can best be promoted by giving recognition to the importance of such program and by training, supporting, and supervising the men responsible for carrying it out. Such program will avoid costly repairs, which require the use of new parts and skilled mechanics' time, and costly downtime which reduces production.

An important result of such program will be the maintenance of a high standard of product quality at the lowest unit cost. Compared to the potential savings which can accrue from such proper lubrication program, the cost of the actual lubricants becomes a relatively

The plain bearings on the 1912 model cotton feeder pictured at the left require much more frequent lubricant application than the anti-friction bearings on the new feeder at the right. But note how the oiling of the old machine has been simplified. A one-shot centralized lubrication system is utilized. Copper tubes convey the oil to each bearing from the tank-pump unit on the side of the feeder.



minor item. The cost difference between an inferior lubricant and a high quality lubricant is a still smaller increment compared to the possible benefits which the use of high quality lubricants will provide.

Recommended Lubrication Procedures. Each individual piece of textile machinery needs special consideration in order to select the best lubricating practices. There are, however, certain general considerations for a lubricating program which are desirable.

For example, in the planning and the carrying out of the lubrication program which will give maximum benefits to a textile mill, a number of important steps should be considered, as follows:

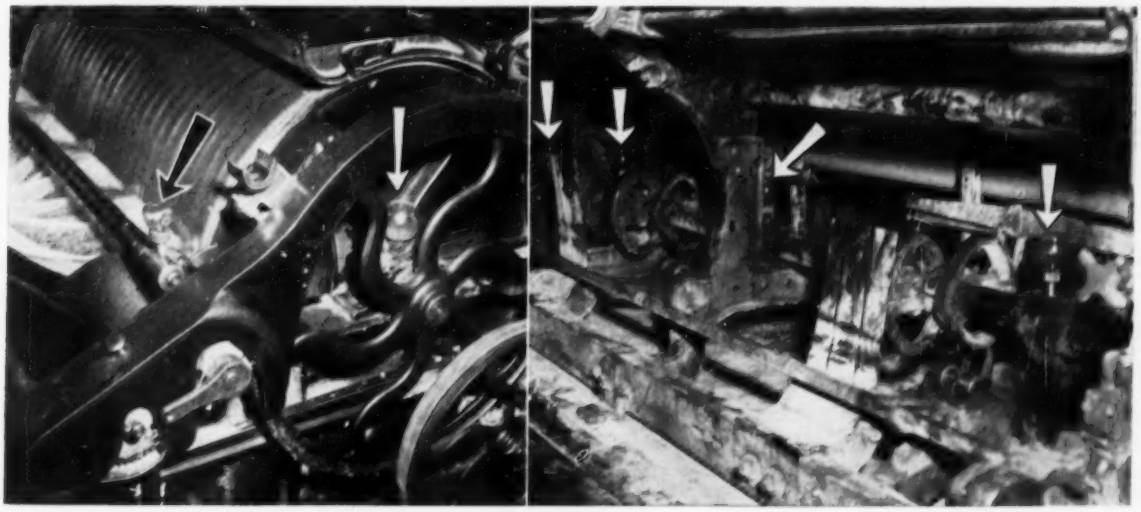
1. Review machinery parts to be lubricated.
2. Select lubricants.
3. Decide on frequency of application based on past experience and best advice of machinery builder.
4. Consider method and equipment for lubricant application.
5. Review lubricant storage and handling procedures.
6. Pinpoint responsibility for training and supervising personnel who will do the lubricating.

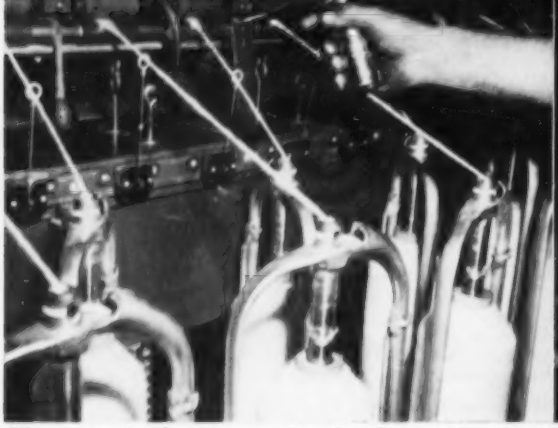
WHAT MANAGEMENT CAN EXPECT FROM A GOOD LUBRICATION PROGRAM

Results of Good Lubrication Program	Benefits to Textile Plant
1. Protect machinery and lengthen its life.	Reduce capital expenditure, cost of parts and maintenance.
2. Improve and maintain the operation of machinery for the production of high quality textiles.	Insure top financial return from sale of plant output at highest quality level.
3. Protect material against spoilage from staining or from equipment malperformance.	Increased production from maintaining spoilage at a minimum. (Rejected material cuts production just as much as reduced speed or shutdown. It is actually worse from a cost-of-production standpoint, moreover, for it also wastes raw materials.)
4. Less consumption of lubricants and power. Reduced downtime for maintenance and less labor required for lubricant application.	Reduction in costs of operation including that of power, of lubricants, of labor, and of shutdowns.
5. Minimize possibility of hot running bearings due to lack of lubrication.	Reduction in fire hazard.
6. Provide uninterrupted operation.	Increased production and *profits*.

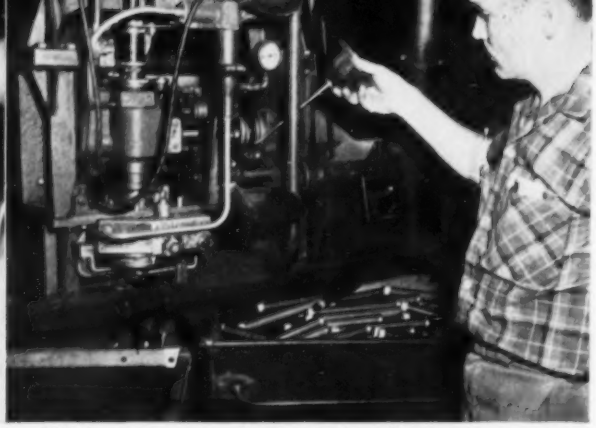
Lubrication Schedule. A careful study of equipment needs, based upon plant experience and advice from the equipment manufacturer and lubricant supplier, should be used to develop a written lubrication schedule for the direction of lubricating personnel. Such a

With bottle oilers lubricant is fed over a long period at a more even rate than is possible with manual application. Note bottle oilers (arrows) on comb shaft and doffer bearings of the card in the left photo; cylinder bearings are also lubricated this way. At right is rear view of loom showing four (arrows) of the five bottle oilers on camshaft bearings; three are used on crankshaft bearings.

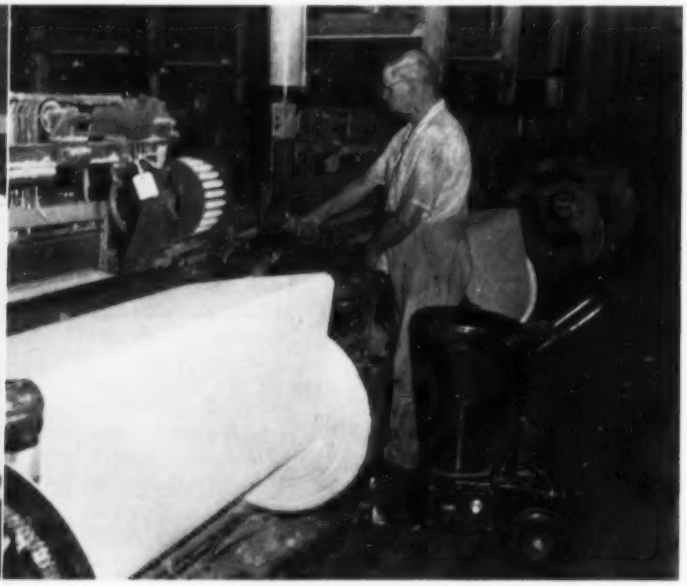




Oil cans are scientific instruments these days. Types can be obtained which can be adjusted not only to deliver the required amount of lubricant but also to guard against drippage. The pistol-grip-type can used for oiling drafting rolls (left photo) offers these advantages.



Still there are many applications in the mill where the conventional squirt-type can (right photo) is satisfactory. Viscosity of the lubricant to be utilized must be taken into consideration when buying dispensing equipment for oils.



It is important to select the very best equipment which can reduce the manpower required for greasing. In many cases the use of automatic type greasing equipment reduces the possibility of contamination which is present with frequent refilling of a hand gun. Two kinds of portable automatic grease dispensers are pictured here; many others are available. Pressure to operate the one being used in the left photo is supplied by a hand-operated pump; an electrically driven pump supplies pressure for the one at the right. In some mills additional protection from lubricant contamination is obtained by applying grease directly from the container in which it is delivered to the mill. Drum of grease is mounted on a dolly (for easy rolling in mill aisles) and fitted with a pump and gun with hose of suitable length to keep to a minimum the number of times that an operative is required to move the drum.

schedule is valuable in training new personnel and in serving as a guide in studying possible improvements to the procedures.

It is desirable that lubrication schedules be planned with some consideration of the cleaning schedules to simplify work where possible. For example, it is desirable that any picking of spinning frames to remove lint and any blowing down of equipment with air be done *before and not after* the lubrication is accomplished. This is to prevent splattering of fresh lubricant which may get on and discolor yarn or materials.

It is entirely possible that the mere planning of a lubrication schedule will itself develop improvements in the operation of a plant which will either save manpower or other costs, or insure improved machinery performance.

It is of interest that it is not an objective of planning a lubrication schedule to increase the frequency of re-lubrication except where necessary. In many cases it may be found that less frequent lubrication or the application of less lubricant will be entirely suitable when proper products are used.

The carrying out of a suitable lubrication program will also guard against lack of lubrication which can result in hot bearings which can be responsible for fires in textile mills.

Lubrication Equipment. In planning the program it is well to consider the desirability of selecting lubrication equipment, such as oil cans and grease-dispensing equip-

Courtesy Westinghouse Electric Corp.

Where bearing seals are provided, as on anti-friction bearings, pressure guns, if not carefully used, can rupture them by forcing too much grease into the bearing. With too much grease, overheating results. Look what happened to this motor because of overgreasing. Note that it is also a cause of winding failures. The grease comes in contact with the stator and eventually causes insulation failure.

ment, which is most efficient from the standpoint of manpower required and ease of application.

Oil cans are scientific instruments these days and types can be obtained, for example, which can be adjusted not only to deliver the required amount of lubricant but also to guard against drippage which can add to the dirt and fire hazard in textile mills. In some cases anti-friction bearings are lubricated by the use of hollow injection needles, which can be screwed to oil can spouts, through which lubricant is fed to the bearings.

Obviously it is important that any selection of oiling equipment give consideration to the specific lubricant which is intended for use. For example, an oil can selected to deliver the correct amount of a certain type of oil may give either too much or too little application if a higher or lower viscosity oil is subsequently used.

It is also important to select the very best equipment which can reduce the manpower required for such items as greasing. In many cases it may be found desirable to use larger grease-dispensing equipment than a hand gun to reduce labor required in refilling. In many cases the use of automatic type greasing equipment may also reduce the possibility of contamination which is present with frequent refilling of a hand gun.

It is desirable to review the lubrication points to determine whether oil cups, bottle type oilers, wick feed oil cups or grease pressure fittings should be installed to improve operation by reducing manpower required for lubrication and minimizing the possibility of contamination. One very definite advantage of bottle oilers and wick feed cups, for example, is the fact that lubricant is fed over a long period of time at a more even rate than is possible with manual application.

There is a fertile field in the consideration of lubricant applications on textile machinery for ingenuity and for the use of methods which have been found useful elsewhere. Representatives of the lubricant supplier are usually in a position to advise on these points.

Central Lubrication. A significant development which has gained increasing acceptance in recent years is the use of centralized lubricators on textile mill machinery. By this means it is possible to have the lubricant for a large number of machinery points applied in the desired amount by means of piping from a central applicator. The lubricant is either filled into a central reservoir or it can be drawn directly from the original supply drum and metered to the individual points.

It is of interest that centralized lubricators can be used to apply

What happened in the motor pictured above will also take place inside this picker beater shaft bearing housing if too much grease is forced into it with a pressure gun. To prevent over-lubrication of anti-friction bearings, some mills have adopted the practice of having qualified personnel clean and regrease them at specified intervals, with instructions to lubricating personnel that these bearings are not to be greased between times. As a result, bearing failures due to faulty lubrication are practically nil, they report.

CHECK LIST FOR MANAGERS ON THE LUBRICATION OF TEXTILE MACHINERY

The following are major points to check in planning, carrying out, and supervising the lubrication program of a textile mill:

1. Have a written lubrication schedule.
2. Assign responsibility for lubrication and make certain oilers are properly trained and supervised.
3. Make certain that suitable quality lubricants are used, particularly on critical applications.
4. Use as few lubricants as possible to simplify handling.
5. Consider the possibility of installing automatic oiling devices.
6. Provide modern lubricating equipment, including air-operated grease guns where necessary.
7. Provide the best type of oil cans with pistol grip to give proper lubricant amount.
8. Have lubricant containers stored in protected area, preferably indoors, and maintained in clean condition.
9. Provide proper storage for lubricating equipment and oil cans adjacent to places where oiling will be accomplished.
10. Make sure oil lead-in pipes to bearings are checked periodically and cleaned where necessary.

both oil and grease type lubricants. The grease selected for use in such lubricators must be readily pumpable at the conditions and pressures of operation and must not separate into a soap and oil phase in the distribution lines.

Lubricant Storage. Due to the contamination feature which may occur, particular care of lubricants before use is advisable. Wherever possible they should be stored in the best central location where some provision can be made to maintain the area as clean as possible and the responsibility assigned for insuring proper storage. Drums should not be stored outside bung end up or water may enter, caused by rain and normal breathing. [For more suggestions on storage and handling of lubricants, see TI for March and April, 1956, pages 111 and 133 respectively.—Eds.]

How to Determine Source of Fabric Stains. In many cases fabrics may be stained in a mill and there may be no indication of where the contamination is occurring. It has been found possible in many cases to trace down the source of staining where lubricant is involved by making use of a so-called black light. Lubricants when exposed to such light will give various degrees of fluorescence.

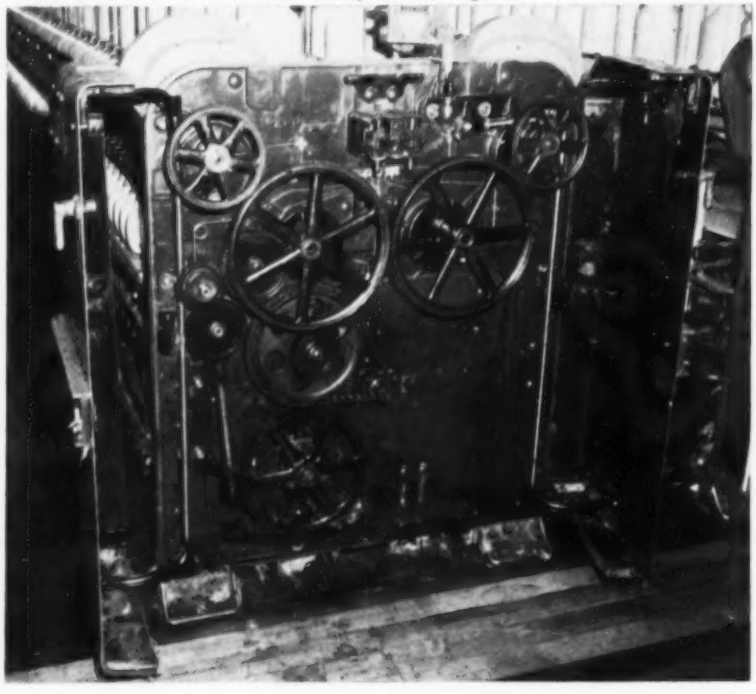
It is possible by this means to determine the pattern of fluorescence of the new lubricants used in the mill and then by exposing the stained material to the light to compare its fluorescence with that of new lubricants. In numerous cases such means has pinpointed the source of staining and indicated the appropriate action needed to eliminate it.

High Quality Lubricants Pay. And last but not least, the use of high quality lubricants will insure maximum benefits, particularly on critical textile machinery applications. The use of inferior lubricants can be compared to the use of cheap paint on a house. The labor of applying both high and low quality paints one time is the same, but with inferior paints it is necessary to paint more frequently.

Inferior lubricants are relatively even more unsuitable than cheap house paints for even with more frequent lubricant applications, the machinery will not be as well protected as it would be with high quality lubricants.

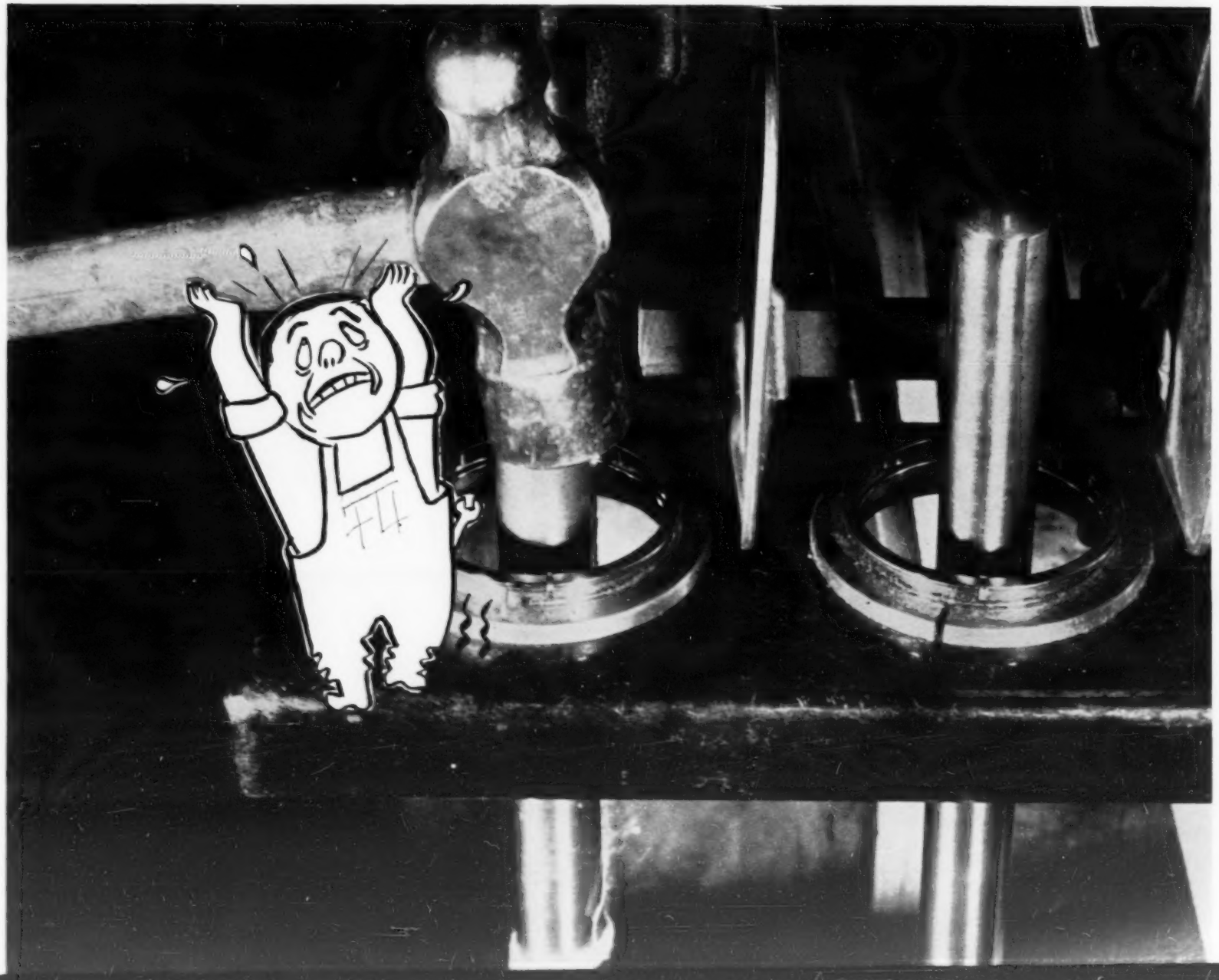
(Part 2 will appear in the September issue of this magazine. Included are a summary of important lubricant characteristics required by textile machinery, hints to lubricating personnel, and discussion of special lubricants required.—The Editors)

Collected lint on machine parts acts as a wick to draw lubricant from the surfaces, making more frequent lubrication necessary. Note how the openings in this spinning frame head end have been covered with sheet metal to keep lint out of gears.



PRY OFF THE TRAVELER!

Hammering will ruin the ring



Tear along this line to post in mill

PRY OFF THE TRAVELER!

Hammering will ruin the ring

Textile Industries
3

Textile Industries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

Tear along this line to post in mill

If you can't wait for the battery filler, Mr. Fixer,

PLEASE WASH YOUR HANDS!

Textile Industries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

Textile Industries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

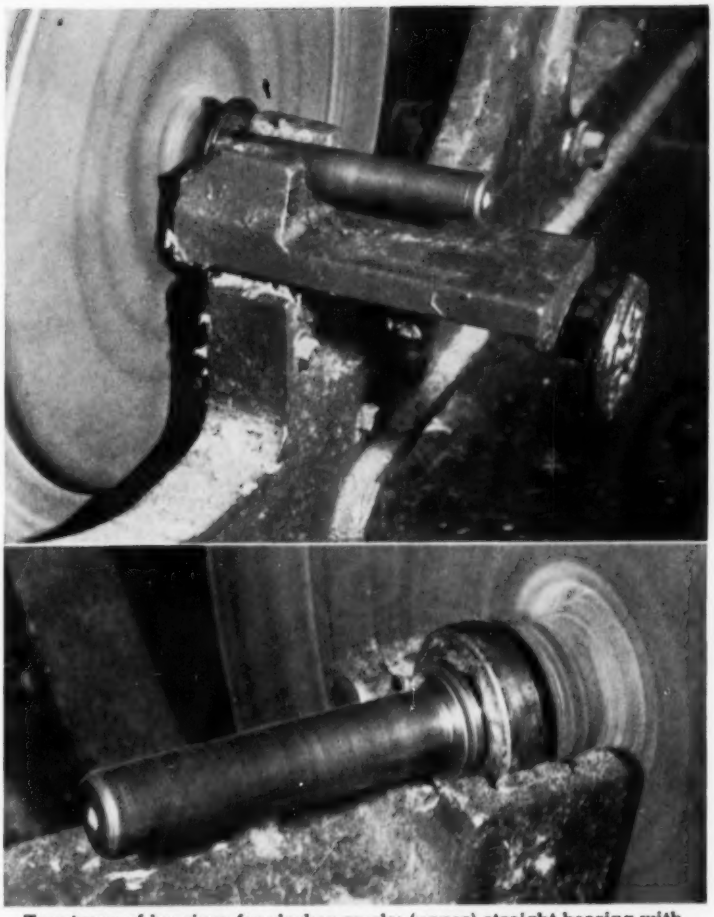
Tear along this line to post in mill

WARP SIZING

Article 16—Discussion of the various kinds of slasher creels and methods for taking care of the size box rolls*

By Paul V. Seydel, D.Sc.
Seydel-Woolley & Co.

Exclusive



Two types of bearings for slasher creels: (upper) straight bearing with large washer to aid in controlling tension; (lower) ball bearing creel.

Creels. The creels on the slasher should be kept in perfect alignment so as to keep an even tension on each beam as it feeds into the body of the warp. The creels should be braced with suitable cross-members to make them sufficiently rigid. In order to insure that the journals of the creels are not so tight that they put an excessive amount of friction on the beam, it is a good idea to use (between the beam head and the journals) a large metal washer about 2½ to 3 inches in diameter, ⅛ to 3/16-inch thick, with a hole somewhat larger than the diameter of the beam head spindle.

This will turn with the beam as the yarn unwinds, provided the journal has not been tightened too much. Should the journal be too tight, the washer will remain stationary. This can be easily seen by the overseer or slasher man as he passes.

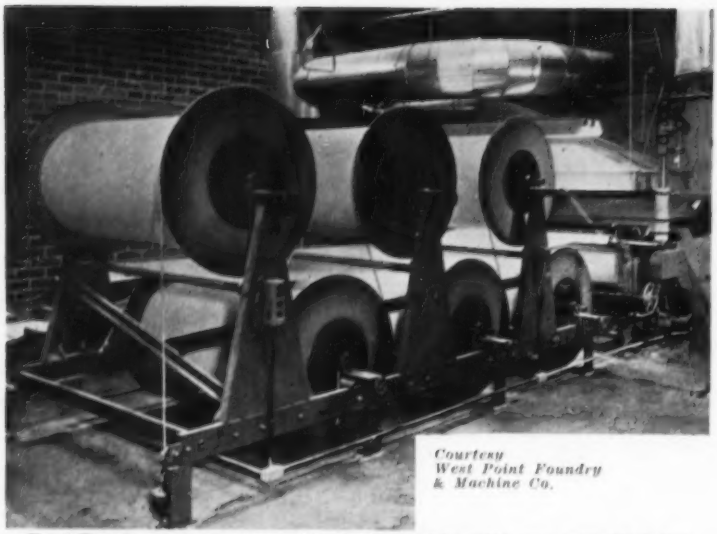
Some of the newer creels are equipped with roller or ball bearings for the journals of the section beams. This allows the beam to rotate more freely, with less tension. At the same time, it also increases the possibility of an over-run when the slasher is stopped, which would release the tension on the yarns. In this way, the yarns might kink and tangle, so it is necessary to add a certain amount of friction by the use of ropes around the beam heads, or other friction devices.

This might sound like putting lemon in your tea to make it sour and then adding sugar to make it sweet. However, the result is that a more accurate control of the tension is obtained, and only the amount of tension necessary to prevent over-runs is used. Even this may be applied only on slowing or stopping the slasher if it is desired to release practically all tension.

Some mills have adopted a type of creel designed to control automatically the tension on the section beams, thereby equalizing the strain on the ends coming from the different beams. This invention consists of a frame support made of angle iron carrying a tension device. The frame runs along the creels just outside each end of the section beam bearings. It is parallel to and about 5 feet above the floor. Shafts running across the creel are supported on bearings on this frame at intervals, slightly in front of each section beam.

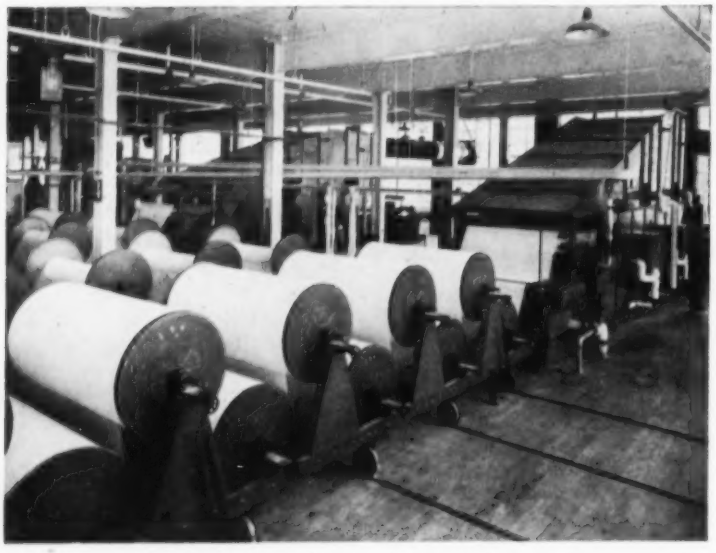
At each end of these shafts are arms fastened at right angles and extending in opposite directions about twelve inches from the shaft center. One end of this arm is

*Continuation of discussion of the slasher room and its equipment, which began in the June issue. The first article of this series, which deals with all phases of the warp sizing operation for cotton yarns and yarns produced from man-made fibers, appeared in the May, 1956, issue of this magazine. Reprinting of the entire series in book form is planned.



Courtesy West Point Foundry & Machine Co.

Equi-Tension creel with guide rolls. Guide rolls are provided for several reasons: (1) to support the warp as it passes through the creel; (2) it is desirable to put the separate warps together into one sheet as quickly as possible to prevent rolling and misalignment of the ends; (3) guide rolls tend to act as snubbing rolls, smoothing out inequalities of weighting and diameter on the different section beams; (4) they keep the warp from passing between the heads of the beams ahead, eliminating rolling or breaking of ends caused by warp ends rubbing against the inner sides of the beam heads; (5) with the guide rolls the exact alignment of the beam head flanges (by means of the handwheel-operated adjusting screws) is not so critical as with the over-under creel.



Slasher room equipped with magazine creels.

fastened to the friction rope controlling the friction of the beam. The other end of this arm carries a floating rod about ¾-inch in diameter, which is free to turn. This floating rod is supported by the sheet of yarn passing under it.

The yarn from each section beam passes over a ball-bearing guide roller, which is free to revolve around the shaft of the tension device, then underneath the floating roller and on to the slasher.

The weight of the floating roller tends to pull the sheet of yarn downward. As it moves down, due to the see-saw action of the fulcrum, the end carrying the friction rod moves upward, tightening the friction on the beam head. When more friction is applied, the tension on the sheet of yarn becomes greater, which causes it to raise the floating roller, which in turn lowers the end carrying the friction rod and relieves the tension. This action soon reaches equilibrium, and a uniform tension is maintained, the degree of which is governed by the weight of the floating roller.

Thus, the sheets of yarn from each of the section beams are delivered to the size box under the same tension, causing all of the section beams to run out at the same time, greatly reducing the amount of waste made on the end of each set. This waste is claimed to be reduced from 40 to 60 per cent, as compared with the old method of creeling. The uniform tension of the yarn wound onto the loom beams greatly reduces warp breakage on the looms.

Magazine Creels. In order to save time in slasher operations, so-called "magazine creels" have been developed. Identical creels mounted on trucks and rolling on tracks are used, so that one creel can be loaded, and the ends counted off, ready to tie in while the slasher is running. As soon as a set runs out, the empty creel is rolled away, and the full one is pushed into place. One type of magazine creel is equipped with air actuated brakes to prevent overrunning of the section beams on stopping the slasher. They are so designed that little or no friction is applied while the machine is running. The braking is done when the slasher controls are operated.

Another type of beam brake device for the creels, to enable free running, even tension, and less waste from run-outs, is a device by which the movement of the shipper handle applies friction to the beam heads through a rope passing around the heads. The rope, fastened to a lever on the shipper cross shaft, passes over the

beam head to a weight which rests on the floor during normal operation, but which is picked up by the movement of the rope by operating the shipper handle (see Article 10, TI for April, 1957, p. 144).

With over-and-under creeling, the rope is necessary only on the back beam. A spring could also be used. The ropes or springs are anchored to the floor or frame so that the section beam is turning toward the anchored end and away from the weighted end.

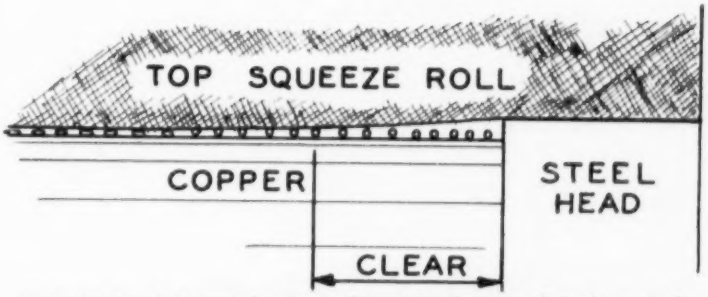
. . . . maintain the bearings, surfaces, and journals of the squeeze rolls and metal rolls. . . .

Care of Rolls. It is very important to keep all the rolls on the slasher in good condition. All bearings should be periodically inspected to insure smooth free operation. Copper or stainless steel rolls should be tested from time to time to see that their surfaces are smooth and perfectly straight from one end to the other.

The diameter should be the same throughout the length of the roll. Otherwise, the yarn passing between the metal roll and the squeeze roll will not be evenly dressed across the entire width. If metal rolls become scored or warped, they should be turned down. If there is not sufficient metal for this purpose, they should be sent back to the factory or discarded.

Care should be taken when renewing the copper tubing of copper rolls, that the heads are not turned in so tightly that the tubing is expanded, thereby causing a larger diameter at each end than in the middle of the roll. If this happens, or if the heads are any larger in diameter than the main body of the roll, the roll will ride on the heads rather than on the warp yarns, and proper dressing of the yarns will not be obtained.

The metal rolls should normally be kept turned to the same diameter. Some slasher men prefer to have the roll nearest the cylinder slightly smaller in diameter, say 1/32 or 1/64 of an inch when running light sets, in order to take some of the strain off the yarn. If the rolls are of different size, care must be taken that their positions are not reversed, thus producing excessive stretch.



If the heads of the metal rolls are larger in diameter than the rest of the rolls, the squeeze roll will ride on the head instead of the warp yarn and proper dressing of the yarns will not be obtained.

Courtesy Dayton Rubber Co.

The feed roll feeding the yarn into the slasher box should be smooth and should not be allowed to cake up with hard size or strings.

The feed roll feeding the yarn into the slasher box should be smooth and should not be allowed to cake up with hard size or

strings.

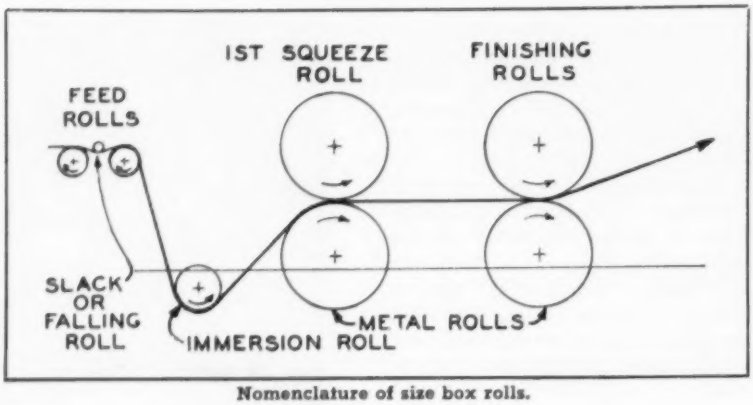
Immersion Rolls. The immersion and metal roll heads and seams should be kept tight at all times so the size cannot enter. Neglect of this precaution may cause staining.

There are several types of immersion rolls on the market. One consists of the conventional solid type roll of 4 or 5 inches diameter, which for most purposes is very satisfactory.

Another consists of three small rolls parallel to each other but spaced at the end in each corner of an equilateral triangle. It is claimed by the inventors that the bending of the yarn around these rolls has a tendency to knead the size into it. Also, one side of the yarn passing in contact with the first roll is open to the size on the second roll, and for this reason gets a better coating. This type of roll has not found much acceptance.

Another device which has come on the market in recent years, consists of a squirrel-cage type apparatus. The roll is made up of a series of horizontal bars about 1 inch apart fastened into two headers that carry the spindle of the roll. This gives a hollow roll so that the size comes in contact with the yarn on both surfaces.

The inventor claims that, particularly on heavy sets, at least one per cent more size can be obtained than by the use of the conventional solid roll. The results seem to be satisfactory. This type of roll also prevents lumps of size being trapped between the roll and yarn, and being mashed flat on the yarn.



Nomenclature of size box rolls.

There is also a type of roll similar to the solid roll, but with a ribbed surface that permits the size to get around part of the yarn.

The greatest disadvantage of these special rolls is that they are harder to keep clean than ordinary rolls.

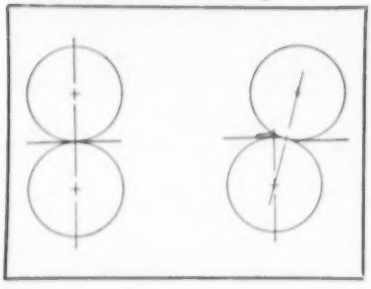
This problem is simplified with the single-roll boxes, which have just one pair of squeeze rolls. Single-roll boxes are rather common in Europe, but are used in this country usually only when running filament yarns, or when running rather light sets. The double pair of rolls, in addition to giving better dressing, has twice the grip on the yarns, so that the yarns are more certain of being pulled from the creel by the squeeze rolls, rather than having to put additional tension on the wet yarns so that there is enough pull by the drag roll to keep the set moving.

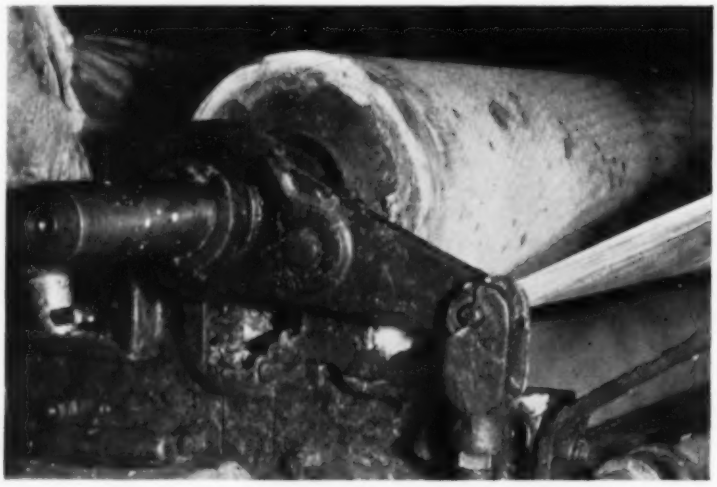
Squeeze Rolls. There is often confusion in the naming of the squeeze rolls: front, back, first, second, sizing roll, finishing roll, dressing roll, etc. We prefer to call the rolls "first roll," meaning the roll that the yarns go under first, and "finishing roll"—we believe this system of naming gives less chance for ambiguity than any other.

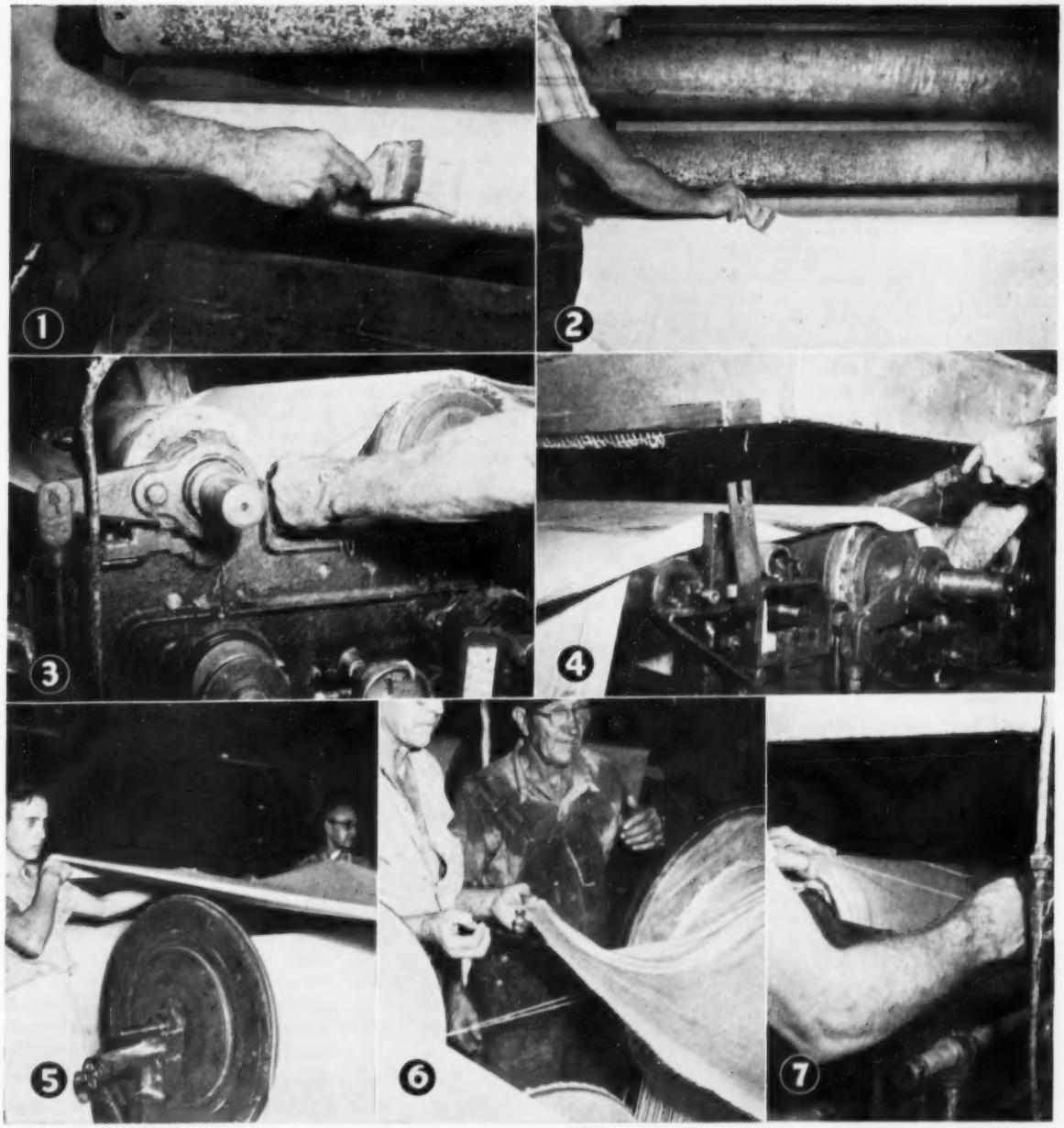
The squeeze rolls are probably the most important of all. If not in good condition they may play havoc with the dressing of the yarn. For heavy sets containing a large number of ends, it is preferable to have a heavy squeeze roll. It not only dresses the yarn better but forces the size into the yarn.

The bearing of the squeeze roll should be kept in good shape to keep the roll centered on the high point of the metal roll. In this way

The squeeze rolls should be centered on the high point of the metal roll. If the squeeze roll is too far forward, size will collect on the warp and cool excessively.







Wrapping blanket-covered squeeze rolls: Photo 1, leading steel roll; Photo 2, painting first layer of duck; Photo 3, inserting blanket under top layer of duck; Photo 4, wetting down blanket; Photo 5, blanket must be kept smooth and tight while winding; Photo 6, edge is raveled to prevent lap marks; Photo 7, a few yarns will help hold blanket in place on starting up. This and other methods are discussed here.

no layer of size flows on the yarn just in front of the nip of the two rolls. If this size does flow out at that point, the same action occurs as when coffee is cooled by putting it into a saucer—the size becomes chilled and is injured. If a layer of size should form, the squeeze roll may be set slightly back of the exact center, say about ⅛ inch. When the roll is slightly in back of the high point of the metal roll, the size is squeezed out through the yarn and into the size box.

Squeeze rolls are either blanket-covered, yarn-wound, or synthetic-rubber covered. The blanket-covered type will be discussed first.

When blanket-covered squeeze rolls become rusty and pitted, as they do from time to time, they should be tooled down in a lathe and prepared again for use in the following manner:

Paint with white lead and cover with 5 yards of a light weight duck cloth. This cloth should be painted with white lead as it is wound onto the roll for all but two or three feet. The remainder is left unpainted and is used as a lap for securing the blanket to the roll.

The roll should be set aside un-

til the paint has thoroughly dried, at which time it can be put in the slasher. Six yards of 16-ounce wool blanket should be wound on the roll.

An alternate method, preferred by some operators, is to paint just the first two or three rounds, then wind on more duck to about ½ inch thickness (after running for some time, this will pack down to about ⅜ inch). The advantages claimed for this method are that it gives more cushion, requiring less blanket, and that the blanket, with this cushion, lasts longer. The difference in actual operation is not very great. One must only be careful not to get too much cushioning effect, or the roll will not dress the warp properly, and increased shedding will result.

Excess cushion may also cause troubles from blanket slippage.

It is always good practice to break in a blanket on the first roll and then transfer it to the finishing roll. In this way the wool becomes better felted, thereby giving a better and more uniform finish to the yarn. Both cut edges of the blanket should be raveled somewhat, and brushed out to a feather edge with a wire brush. In this way a smooth roll is obtained, and the tendency to produce lap marks on the yarn sheet is decreased.

If the weight of the first and finishing rolls is the same, then it is best to move the first roll to the finishing roll position after the new blanket has been broken in on the first roll.

After a blanket has become set, it is better practice to leave it on the roll until it is worn out. It must be trimmed from time to time as required. When the slasher is to be stopped for any considerable length of time, the blanket should be washed thoroughly on the roll with water, so as to dilute the size to such a point that when it congeals it will not set hard enough to take the cushion out of the roll. A blanket should last 200 hours with the slasher running at normal speed.

Another and probably more satisfactory method of handling blankets, instead of swapping rolls, is as follows:

Instead of using seven yards of new blanket, use two 3½-yard pieces, one new and one old. Put the 3½ yards of new blankets next to the duck cloth, then 3½ yards of old blanket on top of this. Trim the blanket as it wears. When the old blanket has worn down to about one and one-half yards, take off both pieces, put 3½ more yards of new blanket next to the duck, and put the 3½ yards of ex-new blanket just taken off on top of this. By the time the outer 3½ yards has worn out, the inner piece has been properly broken in, and is ready to be used on top.

This system gives a more uniform cushion, and prolongs the life of the blankets. Also, much less variation in blanket cushion is encountered than when using only one piece of blanket, not only because part of the blanket is always "broken in," but also because the total length of blanket on the roll will not vary widely. We have seen operators using a one-piece blanket six or seven yards long, leave it on the roll till it has been trimmed down to a yard and a half. At this point, very little cushion is left. The change from this condition to a new piece of seven yards will give a very large variation in pick-up of size and dressing of the yarn.

The importance of having good blankets maintained in proper condition cannot be over-emphasized. Bad blankets often cause sticking and shedding, and blankets not properly taken care of can be the cause of hard size. The amount of size put on the yarn, and the uniformity of the size coating is directly dependent on the condition of the blankets.

Wool slasher blankets normally are furnished in weights of from 13 to 18 oz per yard. The heavier weights are recommended where it is desired to keep more size on the yarn. If the heavier weight does not dress off enough size, shedding may result, and may often be corrected by changing to a lighter weight blanket, which will give less cushion.

Generally a twill weave is used. Where a particularly careful job of sizing is to be done, a satin weave may be preferred, since it is claimed this gives less tendency toward lap marks.

In slasher blankets, the latest development is a seamless "boot," which is tailor-made to suit the squeeze roll diameter. It is stretched while drying, slipped on over the roll, and wetted to shrink-fit it. Its greatest advantage is the complete absence of lap marks.

Some mills have found it to advantage economically to use burlap in the place of wool blankets on the first squeeze roll. For this purpose use 3 or 4 yards of burlap as a blanket, then wind on about 3 yards of sheeting over the burlap.

It is good practice to keep a set of spare squeeze rolls on hand (with the cloth leaded on as described above) ready to be put into the slasher upon short notice.

In order to eliminate the problem of periodic turning down of the squeeze rolls, the steel rolls may be covered with stainless steel jackets. This not only eliminates the necessity of cleaning off the rolls once or twice a year, and turning them down when too badly pitted, it also increases the life of the slasher blankets, as it eliminates the rust which has a deteriorating effect on the blankets.

First squeeze rolls should weigh at least 450 pounds, and finishing rolls at least 550 pounds. The higher the speed of the slasher, the heavier the roll will need to be to be able to dress the warp properly. It is for this reason that there has been a gradual increase in the weights of the squeeze rolls used by the mills over the past couple of decades. At speeds over 50 yards per minute, it is desirable to use 700-pound rolls.

For very heavy sets with a large number of ends, the same squeezing pressure will not be exerted on each end as with a small number of ends; therefore, for heavy sets, squeeze rolls of at least 600 to 700 pounds should be used. Starting with a 700 pound roll there is enough metal to turn the roll down several times. When it becomes too light for the finishing roll it can be used for the first roll.

To prevent error, the weight of the roll should be stamped on the end of the roll.

Yarn-wound rolls are preferred by some mills. These rolls are made into spools by the use of

brass discs at each end to hold up to an inch or an inch and a half of yarn on the roll. Covering of the roll is accomplished while the slasher is running. The layers of yarn are wound onto the squeeze roll from cones or spools, which are carried slowly back and forth along the length of the squeeze roll by means of a traversing mechanism, while the roll is turning.

The first few layers of yarn must be wound on while the slasher is not in use, but subsequent layers are added during the actual slashing process. Generally one end of cotton and two ends of wool are wound on the roll together. The proportion of cotton to wool may be varied by varying the number of yarns as well as varying the count of the yarns being wound. Thus the slasher operator is enabled to control the hardness of his squeeze roll, as the cotton yarns will pack much harder than the wool.

Usually a small amount of yarn is added to the roll each day, or every other day, to keep a uniform surface. This is easily done, as the yarn is added without in any way interrupting the operation of the slasher.

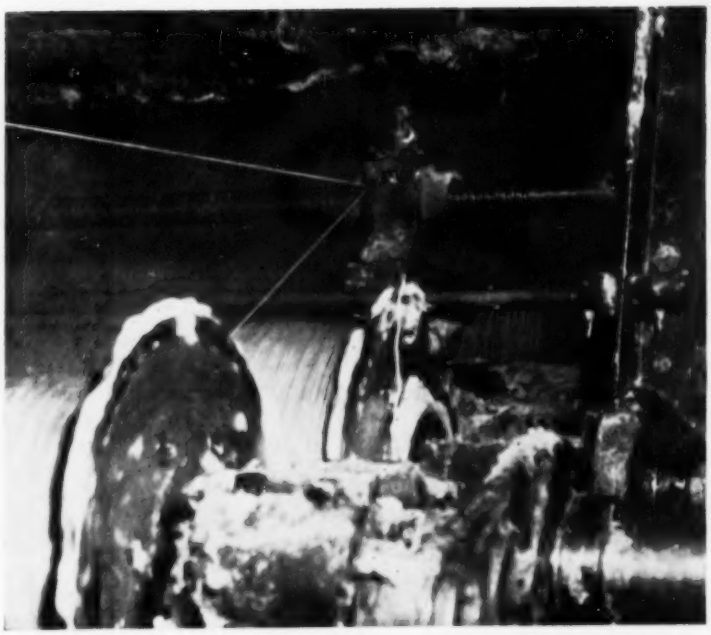
The following method of winding a yarn-wound roll, taken from a report in a slashing discussion, is given:

Clean the roll and paint with white lead. Wind as follows:

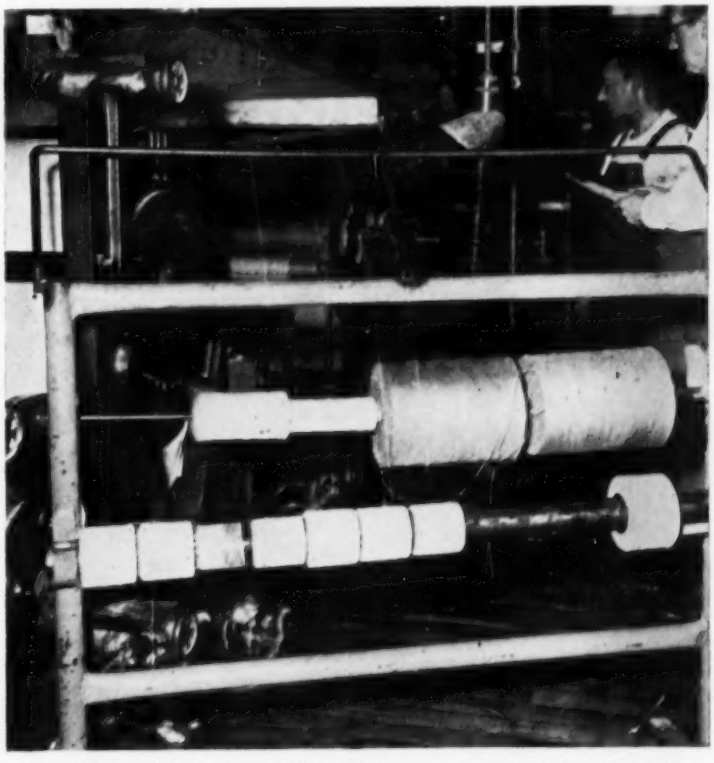
3 ends of jute yarn	2 layers
5 ends of cotton yarn	10 layers
3 ends of wool plus 2 ends of cotton	6 layers
5 ends of cotton yarn	2 layers
2 ends of cotton plus 3 ends of wool yarn	2 layers

The squeeze roll is dressed every 48 hours, using 2 layers of 5 ends of cotton yarn and 2 layers of 3 ends of wool and 2 ends of cotton. About every four months this covering is cut off and the rolls are rewound. The rolls are so arranged that they may be swapped. The back roll is rewound each day, run in that position till the next day, then the rolls are reversed.

The winding is usually done with boiling water or size in the size box to start the roll, and the additional layers added during the regular slashing operations. The yarn combinations used vary widely from mill to mill.



Yarn being wound onto yarn-wound squeeze rolls while slasher is running.

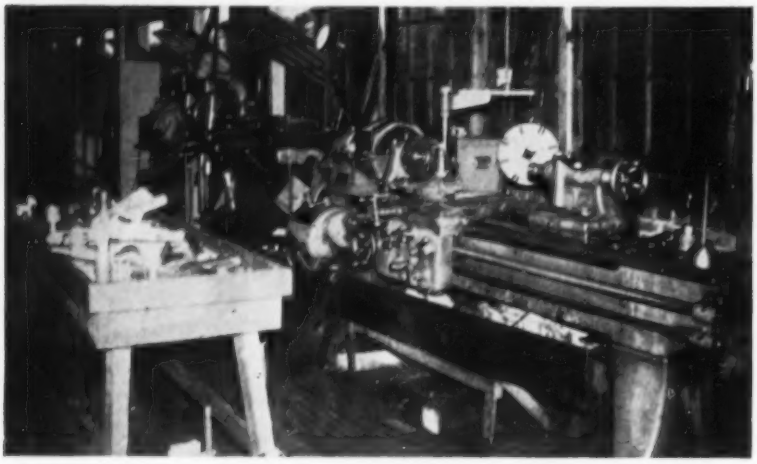


Creel from which yarn is taken to cover yarn-wound squeeze rolls. Both cotton yarn and wool yarn are used to cover the rolls.

Yarn wound rolls have the advantage that they do not cause lap marks, as do blanket-wound rolls, and they roll more smoothly without the bump of a blanket-wound roll. This is more important for fine goods than for ordinary yarns. One difficulty is an occasional splitting of the surface due to shrinkage on drying during long shutdowns.

(Continued next issue)

Light, waste box, and handy table are provided at this lathe. A small boom holds chuck while face plate is used. Also, a number of bad practices are evident in this picture. They are discussed in the text.



Take care of that lathe!

by Sam J. Phillips, Jr.
Exclusive

ONE OF THE important departments in a textile mill is the machine shop; and one of the most important machines in the shop is the lathe. A good lathe is expensive and requires considerable care if the investment is to be protected.

The following observations are based on experience and may prove helpful in caring for lathes as well as for noting several safety precautions of importance: Locate the lathe near a window to assure plenty of natural light, and also provide good light overhead. Place a receptacle under the lathe to catch all the shavings and chips—this keeps the floor clean and prevents foot injuries.

None of the lathe components should ever be overloaded. Trying to machine a part that is too large for the chuck to hold properly, and taking a cut on the work that strains the gears and worms in the apron are among the more common mistakes which prove costly.

The accompanying illustration shows that light, a waste box, and a handy table for the operator have been provided. A small boom is available to hold the chuck while the face plate is being used.

This boom is easily arranged by fastening a two-inch shaft in a floor flange and extending the shaft about six inches above the top of the chuck. Place a collar on the shaft to support an arm which is long enough to extend over the chuck. The arm turns on the shaft and contains a loose bolt in its outer end for screwing into the chuck flange.

First loosen the chuck on the spindle, then screw the bolt from the boom into the chuck tight enough to permit easy removal of the chuck. Turn the chuck completely off the spindle, then swing away from the lathe by hand. There is no strain whatsoever by the operator in removing or replacing the chuck when this arrangement is used.

THERE are a number of bad

Storage space near gear machine saves considerable time. Hobs and arbors of different sizes should be correctly identified and stored for quick and easy access.

habits lathe operators should avoid. Those drills, reamers, and boring bars which have been placed on the bed of the lathe should be removed before they cause an accident.

Never scar the bed of the lathe. This component holds the tail stock, and when it has been damaged or misaligned, precision work is no longer possible.

One reason many operators place tools on the lathe bed is because the work table is cluttered so badly. No work table should ever be used as a storage place for anything since it was made to provide a place to work.

An oil can placed on one of the cross members of the lathe bed (see illustration) is very dangerous to the operator also. If the operator isn't careful when he begins to turn the tail stock wheel to do the boring or drilling in the work, the spout of the oil can may pierce his arm. Any hazardous condition should be corrected without delay.

The illustration shows a face plate leaning against one of the legs of the lathe. I have tried, much to my disgust, to use face plates and chucks that have collected dust, chips, and foreign matter in the threads.

Lathe parts should never be placed on the floor. A convenient cupboard provides good storage. If there is no cupboard, then fix a storage place off the floor and cover with a cloth or paper. Remember, when you have ruined your chuck or face plate, precision work is no longer possible.

Another bad feature about the arrangement shown in the illustrations is that the miller is located too close to the lathe. The operator has trouble getting long shafting into the lathe head stock. I have found that placing machines too close hinders the production of the operators. It would be better to stagger the machines if space is a problem.

The lathe center is a dependable little tool. While doing work requiring the use of the center, use special care not to injure the tip. Keep plenty of lubricant on it and the stock. Maintain the correct speed and don't apply too much pressure on the center. A live center is much better for this operation since no lubricant is necessary.

Sometimes I find that the center hole of the work has been drilled too large or has become worn, especially in arbors. This is bad since the work will not always turn true. When this happens I have found a new center hole should be drilled.

Special care should be exercised in drilling gear blanks and similar parts on the lathe. To drill a true hole, start with a smooth surface, center the work, and go up to the right size hole by stepping from drill to drill. Then ream the hole.

I like to ream about one sixty-fourth of an inch, as this will be easier on the reamer and make a smoother hole. Drilling large holes without stepping up is bad on the lathe as well as the drills and reamers.

The lathe in the photograph has a good foundation—the floor is concrete. No vibration comes to the work by a weak place in the floor. Rubber rolls for the finishing department may be ground accurately on it.

Much time and study have been spent in the past trying to perfect a machine to cut gears. Some few years ago the hob generator was invented, and now many textile plants find it to be very valuable to the entire plant. Gears can be cut very accurately in a short time with little labor involved.

Merely place the blanks on the machine, select the correct index gears and forget them until the machine stops automatically. I have used these machines at several plants and have found they pay for themselves many times over where many gears are made.

One plant in South Carolina bought one of these gear generators several years ago and the general manager was so well pleased he had an entire new set of gears made for every department in the plant. Production picked up, and the maintenance of the machines was reduced a great deal.

We find in our plant that a great amount of time is saved by having a storage place near the gear machine for the hobs and different sizes of arbors. Each hob and arbor are marked for their place so each can be placed correctly after use.

The machine also rests on a concrete foundation, thus eliminating any vibration. Good light is also essential for setting up the gear machine.

2-year textile course offered by Georgia school

Initiation of a new two-year textile course at the Southern Technical Institute, Chamblee, Ga., was announced recently by L. V. Johnson, Institute director, and by Herman A. Dickert, director of the A. French Textile School of Georgia Institute of Technology.

To accommodate the new program, a department of textile technology will be set up at Southern Tech, a unit of the Georgia Tech Engineering Extension Division. In addition to the departmental staff, to be headed by John I. Alford, a former superintendent of Covington (Ga.) mills, students enrolling in this course will utilize the faculty and facilities of the A. French School.

The curriculum, as planned by school officials and textile executives, is a combination of practical experience with machines and classroom science and theory.

Upon the successful completion of the course, graduates will be awarded a degree of Associate in Science in Textile Technology and will be qualified for positions as production supervisors and as technical specialists in standards and quality control laboratories in the mills.

The course will be open to all who have a high school diploma or its equivalent, with two years of algebra, and who pass a standard entrance examination. The course is available under veterans' training programs.

Classes will begin at the Chamblee campus September 23. Interested students should write to Loy Y. Bryant, Registrar, at the Southern Technical Institute in Chamblee for full information, the announcement stated.

TAX and TAX | WASTE and WASTE

"If the American taxpayer is determined to shell out less and less money to his government, he has also got to do a litte more intelligent thinking about what he wants his government to do with his money"

by Ringgold Arden
Exclusive

THE SIZE of the budget submitted by the President this year was a shock to many persons who had fondly hoped for smaller and smaller budgets, rather than bigger and bigger ones. Members of the Congress have been deluged with letters making it plain that a great majority of the people want lower taxes. At the same time, however, these same people want other things which make lower taxes impossible.

We are living in a welfare state, and we have got to face the inevitable facts of State Welfare-ism.

The responsibilities of the welfare state are not discharged by merely taxing the public to take care of the indigent and the unfortunate on a somewhat more liberal basis than their neighbors would approve if they had to use their own money for this welfare work. The welfare state has to do a great many other things which are implicit in the conception of a government responsible for the welfare of its people.

Our government is responsible under the Constitution for promoting the general welfare, but it was only during the flood of socialistic planning of the New Deal that we accepted the idea that the government must not only promote the general welfare, but assume responsibility for maintaining it.

The actual amount of money involved in obvious welfare-ism is small compared to that which has to be expended to maintain the general welfare of communities or groups of persons having a vested interest in government expenditures.

AN OVERWHELMING proportion of the budget covers expenditures for national defense; and every defense agency is a vested interest in some locality; and any attempt to abolish a useless agency, or to put a partly useful agency on a business-like basis, will be violently fought by people who are the beneficiaries of this enterprise.

The local newspapers will hammer away ceaselessly at the senselessness of jeopardizing national defense by not having a few thousand people loafing in their community on a government payroll which goes into the coffers of their advertisers. The local Chamber of Commerce and other public bodies will first petition, and then threaten, their Congressmen and their Senators if any such local gold mine is threatened with closure, or the specter of efficiency foreshadows the laying off of thousands of persons who aren't doing anything anyway.

Almost anybody who has had anything to do with government procurement, or who has had an opportunity to observe the way the government spends money, is familiar with the fact that government methods can easily waste half of any given appropriation. In many instances the waste is much higher than that.

From the standpoint of the community where this money is spent, however, this is anything but waste. It is local welfare-ism, and a community is often wholly dependent on the continuation of this flood of government money.

The very persons who are clamoring the loudest for tax reduction will raise the greatest shout of joy upon learning that some boondoggle in which they are interested has been saved from the economy axe. People want tax reduction for themselves and boondoggle reduction for somebody else.

When there are lush defense payrolls in a state, practically every community which gets no nourishment from the golden stream of government money is frantically lobbying to have some boondoggle for itself; and every time one of these useless excrescences appears, it quickly becomes "a vital defense agency," and its maintenance is practically assured so long as politics operates the way it always has and a taxpayer has got a nickel left.

IN THE WELFARE STATE, governmental thinking is alto-

gether different from what it would be if the government assumed absolutely no responsibility whatever for providing the maintenance for individuals. The "pork barrel" we have with us always, and it is too much to expect Congressmen and Senators not to vote for a lot of this useless squandering when they are trying to keep themselves in office by making friends and influencing people. The welfare state theory expands the pork barrel illimitably, and eases the conscience of the harried legislator who realizes that if he doesn't get some sort of war industry for an importunate community, his opponent who has promised to get it, will probably kick him out of office.

Welfare-ism can seep into every department of government, and all kinds of ridiculous and extravagant expenditures can be justified on the grounds that they are necessary to promote the general welfare.

Soldiers' pensions have been a fruitful source of graft and corruption as far back as anybody can remember. After a big war there are a lot of ex-soldiers who collect themselves into associations wielding vast political power, and this power can be put behind the politicians who promise the most loot out of the national treasury.

The natural responsibility of a nation for taking care of those incapacitated in war, or the dependents of those who lost their lives, can be expanded under the welfare state theory to cover practically anything that a voting ex-soldier thinks he or his family ought to have, and the taxpayer foots the bill for billions of dollars' worth of service which has absolutely nothing to do with a former serviceman's military contributions.

Our foreign aid program also has its welfare aspects. The farmer is now one of the outstanding beneficiaries of welfare-ism, and while the farmer is none too happy about his share of the welfare loot, his troubles have not been as grievous as they might have been if the federal government had not been able to buy billions of dollars' worth of his produce and export this to some receptive foreign countries.

The farmer is by nature a conservative and rugged individualist, but a rugged individualist with money in his pocket may be happier than one without money; and if any taxpayer thinks he will live to see the day when he doesn't have to put up money to subsidize farm products, he is a shining optimist.

Some odd things come up in this foreign aid program. The ordinary citizen who is not indulging in welfare state thinking could assume that his government might have gumption enough to operate this foreign aid business on a basis which would permit aided nations to do business with us rather than accept charity. When, however, some foreign country wants to get hold of some American dollars by the sensible, logical, and honorable process of doing business with us and selling us something we need at a much better price than a racketized American industry can furnish it, a welfare-minded government will refuse to buy goods at a low price and insist on buying them at a high price because the local welfare of people who have instalment payments to meet requires such action.

THE HARRIED TAXPAYER might reasonably assume that the government should spend his money prudently; but a government committed to the idea of a welfare state can not spend money prudently, but must dispense it as local welfare requirements dictate. This idea came very forcefully to the front during the New Deal, when the proponents of that noble scheme for revolutionizing the laws of economics reasoned that money was money, and what difference did it make how it got in circulation. The main thing was that the man who got it was grateful and would reward his benefactors on Election Day.

The budgets of today are largely determined by the policies and actions of yesterday. The foundations of the present fantastic budgets were laid in the early days of the New Deal, when an entirely new conception of the responsibilities of government was sold to the American people. At that time we referred to this as "socialism on credit," and suggested that the public would be very unhappy when the time came to actually pay the bill for the things that we seemed to be getting for nothing during the New Deal regime.

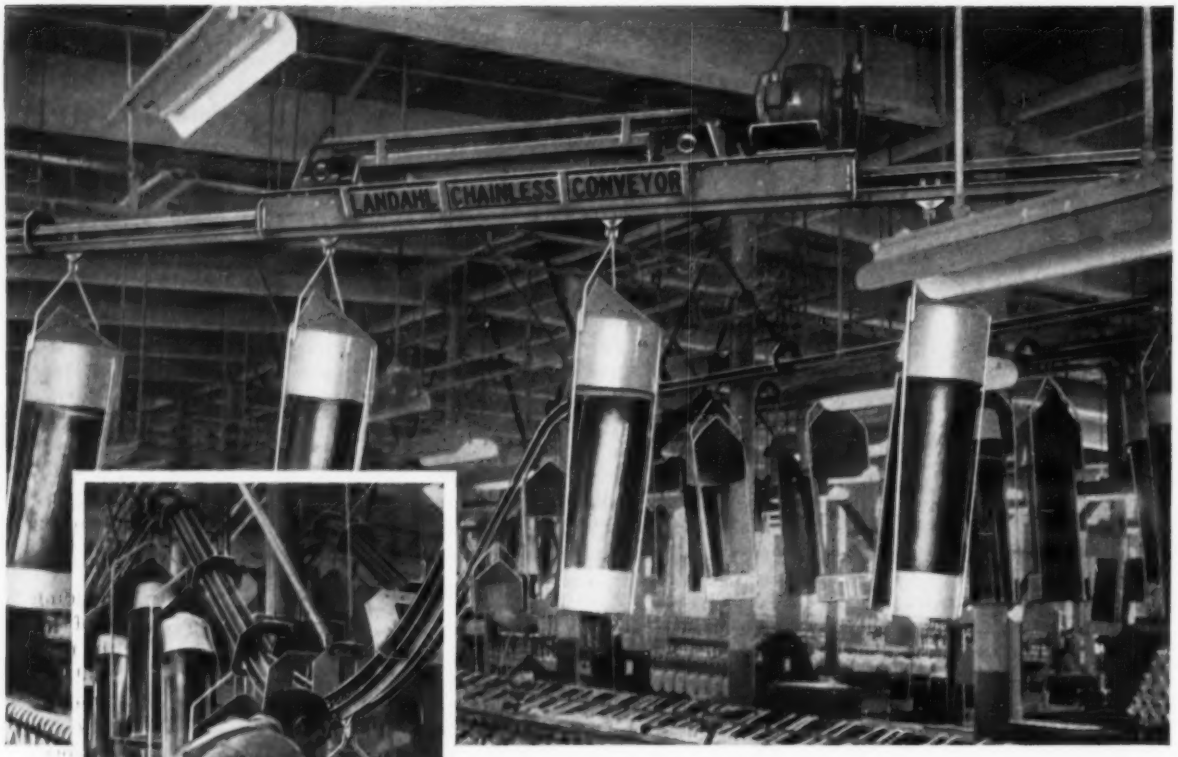
Socialism is now catching up with us, and pay-day is here. The interest on the national debt is about twice what it used to cost to run the entire government, and it is rapidly getting higher as the Treasury has to refund obligations put out at the ridiculously low artificial rates maintained during the early inflationary days. The only alternative to higher interest rates on government bonds is to depreciate the value of money by further recourse to printing presses.

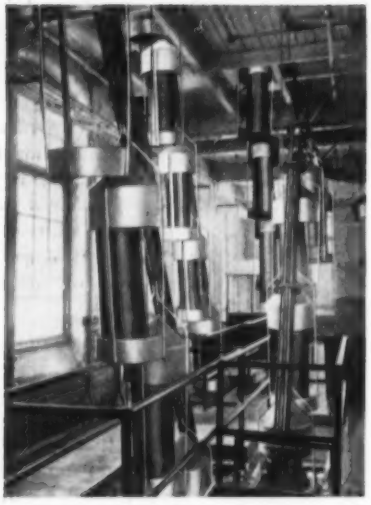
THE LABOR UNIONS are going to provide us with plenty of inflation automatically until the next depression, regardless of what the government policy toward money may be. Higher and higher wages for the same production must necessarily result in higher and higher prices for the same goods, and the government is naturally going to have to appropriate more money year after year for buying the same quantity of the same things.

Scientific developments are constantly making necessary production of new military weapons, but every old outmoded, obsolete defense plant is a sacred cow in a welfare state, and it can not be closed down until every possible effort to keep it going has been exhausted. When, finally, it may be closed down, there will be an insistent clamor to transfer its personnel to some other government payroll connected with some equally useless service.

The demands of welfare-ism are endless and inexorable, and sane budgets are not compatible with the welfare state conception.

If the American taxpayer is determined to shell out less money to his government, he has also got to do a little more intelligent thinking about what he wants his government to do with his money. Until the taxpayer definitely rebels, the government will quite naturally continue to tax and tax, and waste and waste.





LANDAHL Modernizes Cotton Mill with Overhead Chainless Conveyors

534 sliver cans travel automatically from cards to roving machines and return to cards.

In its biggest modernization program to date, this mill has installed Landahl Chainless Conveyors to keep production flowing smoothly. The overhead Landahl systems achieve continuous delivery of sliver cans. There's no disturbing traffic in aisles. There's no time-consuming use of elevators. Each sliver can weighs 27 pounds full, 7½ pounds empty.

A Landahl system can serve your needs, too. Write today —get the facts!

The LANDAHL CONVEYOR CO.
13106 Athens Ave., CLEVELAND 7, OHIO
A SUBSIDIARY OF THE AMERICAN MONORAIL COMPANY

A "unique" Wilton carpet is born

■ The all-wool Wilton carpet pictured here is a special one which was woven by C. H. Masland & Sons and presented to the Army War College on May 29th at the time of the celebration of the 200th anniversary of the founding of the Carlisle (Pa.) Barracks.

"This rug is one of the most magnificient creations of the weaver's art that can be found anywhere," said President Frank E. Masland, Jr., in a bulletin to employees of the company. "It is one of the most difficult products that has come from a Wilton loom. It is unique. I doubt if anything comparable has been made before," he declared.

Measuring 36′ 7″ by 24′ 3½″, it has 6,117,120 wool face tufts and weighs 820 lb (9.33 lb per sq yd). Pile height is .625″. With 12 active frames, it was woven 7½ wires to an inch.

"One of the most remarkable features of this rug," Mr. Masland told the employees, "is the fact that it appears to be well nigh perfect. Though producing it represented many difficulties and involved countless intricate details, such close care was exercised that the rug is far more nearly perfect than the ordinary products that are so easy to make. It suggests what can be done when care is exercised.

"This rug is an indication of what our organization can do when it sets its mind to it. It clearly demonstrates that we have an organization that is capable of licking any problem that may confront us. I am intensely proud of our organization. I congratulate all my Associates, but especially those who were directly involved with the production of this rug. To one and all, may I say 'Well done'."

The photos below that of the carpet were made during its production. From top to bottom, left to right, they are as follows: (1) making the design of the Army War College emblem; (2) cutting the cards; (3) weaving the carpet; (4) cross shearing it; (5) burling the emblem; (6) silver sealing two section of the carpet.

RIGHT...for any frame or fiber ...Armstrong Accotex Cots

Whether you're spinning natural fibers, synthetics, or blends — on whatever type of equipment — there's an Accotex® Cot in the wide Armstrong line specially engineered to solve any spinning problem you may have.

For example, if you're getting too many front roll laps, a switch to Accotex J-490 Cots may be the answer. These cots contain a special electrolyte that neutralizes the attractive forces between fibers and cot. In fact, this unique material actually tends to repel loose fibers. The versatile J-490 roll cover has proved in hundreds of mills how effectively it can control lapping.

Where high static aggravates the lapping problem, one of the new anti-static Accotex materials is often the solution. These new materials are made especially to minimize lapping on frames where non-metallic cap bars are used and where other metal-to-metal contacts have been eliminated. The anti-static cots are especially recommended where synthetics or blends are being spun.

Accotex NC-762 — one of the new anti-static materials — is recommended for controlling eyebrowing on spinning and roving frames. Many mills also report substantially reduced clearer waste with NC-762. And the waste that does form is packed well back under the clearers.

With some types of yarn, it has been found that a softer cot will improve strength and reduce irregularities. Accotex materials made of softer compounds are available to meet this need.

Your Armstrong representative is a good man to talk to about any problem involving roll covers. With his background of experience, he can help you select the right roll cover for best performance on your equipment, whether you're spinning natural fibers, synthetics, or blends. Call him today or write Armstrong Cork Company, Industrial Division, 6508 Ivy Street, Lancaster, Penna.

For more information on Accotex Roll Covers, or other Armstrong textile supplies, write for the booklet, "Armstrong Textile Supplies." Use it as a guide in the selection, installation, and maintenance of Armstrong spinning and weave room supplies.

Armstrong ACCOTEX COTS

. . . used wherever performance counts

Mathieson ETHANOLAMINES are there

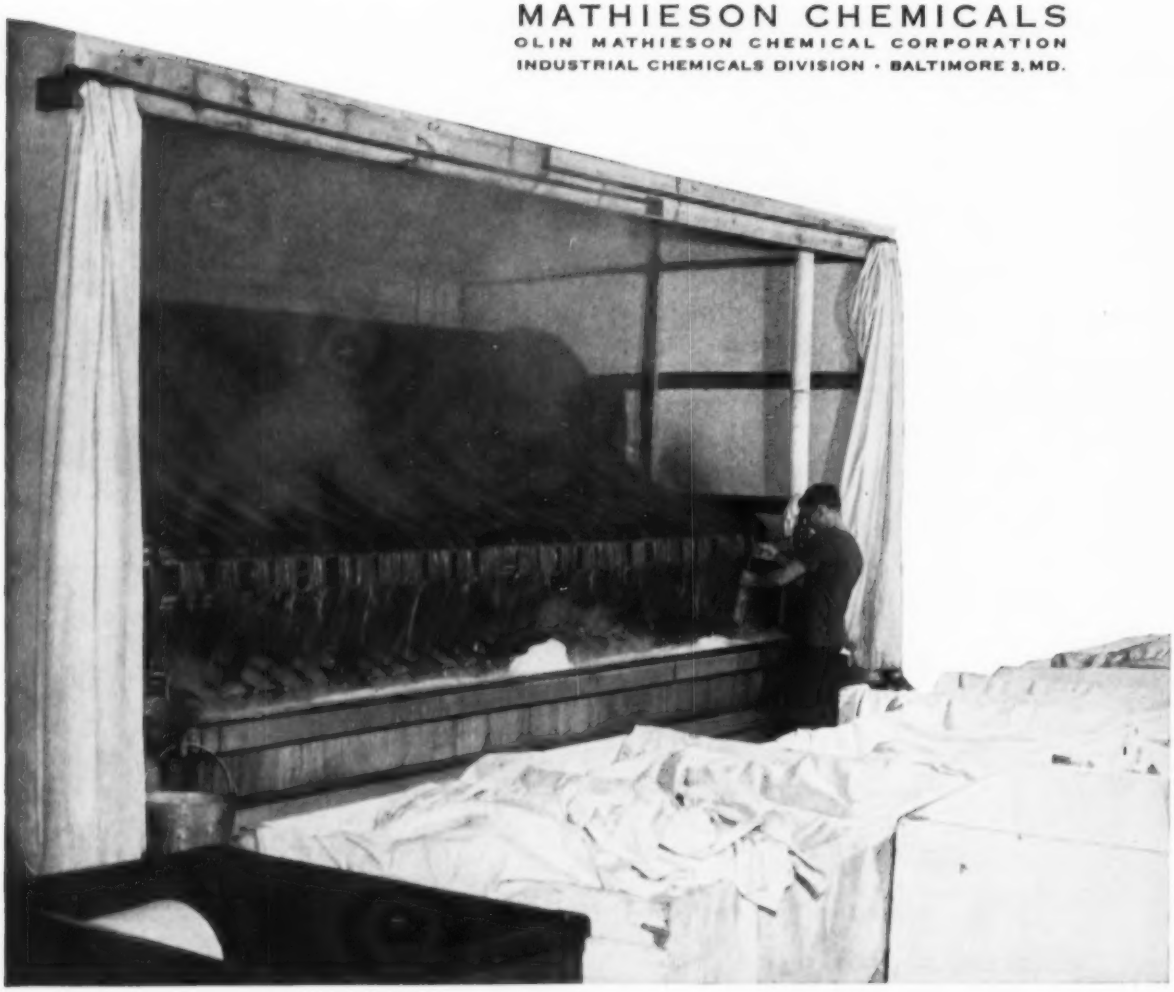
when finer textiles are "in the works"

No repacking or rehandling impairs the high purity of Mathieson mono-, di-, and triethanolamine when it comes directly to you from our Brandenburg, Ky., plant via tank car, tank truck and drum shipment.

And LCL deliveries, *in plant packaging*, maintain the same high Mathieson standards when you purchase from our numerous local distribution points.

Whatever your ethanolamine specifications: fast deliveries, high quality, assured supply, or all three—contact your Olin Mathieson representative for full information and samples.

MATHIESON CHEMICALS
OLIN MATHIESON CHEMICAL CORPORATION
INDUSTRIAL CHEMICALS DIVISION · BALTIMORE 3, MD.



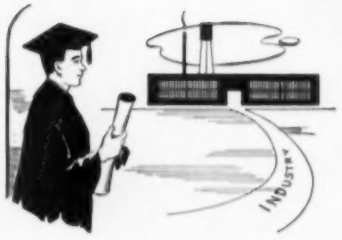
4893

MATHIESON

INORGANICS: Ammonia · Bicarbonate of Soda · Carbon Dioxide · Caustic Potash · Caustic Soda · Chlorine · Hydrazine and Derivatives · Hypochlorite Products · Muriatic Acid · Nitrate of Soda · Nitric Acid · Soda Ash · Sodium Chlorite Products · Sulfate of Alumina · Sulfur (Processed) · Sulfuric Acid

ORGANICS: Ethylene Oxide · Ethylene Glycols · Polyethylene Glycols · Glycol Ether Solvents · Ethylene Dichloride · Dichloroethylether · Formaldehyde · Methanol Sodium Methylate · Hexamine · Ethylene Diamine · Polyamines · Ethanolamines · Trichlorophenol · Surfactants

Congratulations, 1957 graduates of America's textile schools



■ THE DIPLOMAS have been presented, the prizes have been awarded, and the 1957 graduates of America's textile schools have departed for the mills, the sales offices, the chemical labs, the graduate schools, and all other expected and unexpected places where textile grads start their life's work. Here are their names.

The firm where each is employed is given immediately after his name, if it was known at the time the information was compiled by the schools. The word "Military" after a graduate's name indicates that he elected to begin active service with one of the armed forces immediately after graduation.

To all the graduates, "We wish you well."—THE EDITORS.

ALABAMA POLYTECHNIC INSTITUTE

Joseph D. Copeland, Lummus Cotton Gin Co.
James A. Crane, Chemstrand Corp.
Charles H. Crowder, West Point Mfg. Co.
Ralph T. Davis, Callaway Mills Co.
Elmer Durden, Callaway Mills Co.
Paul L. Gregory, Dan River Mills, Inc.
Charles B. Lacy, Riegel Textile Corp.
James A. Lindsey, Riegel Textile Corp.
Virgil T. Lyerly, Riegel Textile Corp.
Gary Nolan, Military
J. W. Sherrer, Pepperell Mfg. Co.
Davis F. Smith, Peerless Woolen Mills
Donald L. Warren, Du Pont
Milner W. Smith, West Point Mfg. Co.
Hiram B. Taylor, Chemstrand Corp.
James L. Wyatt, Avondale Mills

BRADFORD DURFEE TECHNICAL INSTITUTE

Gerald M. Brown
Lincoln L. Bryant
Dennis E. Dorsey
Bernard A. Dube
Robert Halshaw, Jr.
James W. Hornby, Graduate School, Institute of Textile Technology
John J. Hrinko, Military
Philip Lai
John W. Lane, Jr., Military
Bartley F. McNally, Graduate School, Institute of Textile Technology
Louis B. Martins, Celanese Corp.
Richard Oliveira
Raymond C. Richardson, Jr.
Frederick J. Ritz, Celanese Corp.
Walter F. Ritz, Federal Products Corp.
Lawrence F. Simard, Jr.
Joseph Tavares, Jr.

CLEMSON

Willie E. Alford, Cone Mills Corp.
Isam E. Ballenger, Southern Baptist Foreign Mission Board
Rex F. Banister, Lyman Printing & Finishing Co.
W. B. Bennett, Burlington Industries
Charles W. Funderburk, Callaway Mills Co.
Gary Jordan, Du Pont
Richard S. Powell, Clearwater (S. C.) Finishing Plant
Charles E. Browne, Callaway Mills Co.
Harold R. Hutto, Robertshaw Fulton Controls Co.
Richard A. McClelland, Excelsior Finishing Plant
Irvin V. Plowden, Celanese Corp. of America
D. E. Smart, Callaway Mills Co.
W. L. Archie, Springs Cotton Mills
W. T. Barnett, Philadelphia "Phillies" Org.
W. C. Bishop, Jr., Cannon Mills Co.
James C. Bright, Burlington Industries
Charles W. Bussey, Jr., Callaway Mills Co.
Joel P. Campbell, Woodside Mills
C. S. Chance, J. P. Stevens & Co., Inc.
J. F. Cheek
James H. Coleman, Jr., Deering, Milliken
G. E. Crawford, Deering, Milliken
Lyman B. Fields
L. A. Fowler
James M. Hamby, Woodside Mills
J. O. Head, Woodside Mills
B. C. Inabinet
W. T. Linton, Jr., Columbia Products Co. or Blue Bell, Inc.
James M. Lyles, Monarch Mills
William H. McClintock, Jr., J. P. Stevens & Co., Inc.

Clemson continued
J. C. Marshall, Jr.
Olin David Martin, Alice Mfg. Co.
Kenneth Nelms, Callaway Mills Co.
Thomas B. Phillips, Jr., Woodside Mills
G. W. Pierce, Du Pont
J. B. Reeves
Fred W. Reinhold, Jr., J. P. Stevens & Co., Inc.
Rufus G. Revis, Gerrish Milliken Mill
James K. Roger, Woodside Mills
E. T. Smith, Callaway Mills Co.
A. Newton Stall, Jr., Deering Milliken Service Corp.
Richard L. Hawes, American Viscose Corp.
William P. Creighton, Abbeville Mills
Talmage Dewitt Foster, Jr., Union Carbide Chemicals
Coy J. Gray, Excelsior Finishing Plant
George A. Hutto, Jr., Celanese Corp. of America
W. Frank Taylor, Courtaulds, Inc.
Dewitt U. Tilley, Jr., J. P. Stevens & Co., Inc.

GEORGIA INSTITUTE OF TECHNOLOGY

Wade T. Mitchell, Military; then Draper Corp.
David W. Scott, Scottdale Mills
Ray K. Allen, Military
Nelson B. Arrington, Jr., Military
Larry R. Baird, Military
Monroe D. Barber, Riverside Bedding Co.
Bobby G. Beeland
Norman G. Buskill, Jr., Graduate School
Joe Carr, Military
Albert F. Cheatham, Jr., Military
Richard E. Clayton, Judson Mills
Joseph L. Davison, Military
Curtiss G. Hawkins, Jr., Ingersoll-Rand Co.
James E. Hendricks, Lockport Felt Co.
Gabriel C. Hill, III, Drayton Mills
Clifton W. Holbrook, Hatch Mills
George Dayton Moss, Graduate School
J. Vernon Nicodemus, Jr., J. C. Penney Co.
Francisco H. Palacios, United Merchants & Mfgrs.
Anil G. Parikh, Graduate School
Helen J. Patterson, Fulton Bag & Cotton Mills
Roy H. Reynolds, Jr.
Robert K. Rushin, Military
Eugene D. Scott, American Instrument Co.
Samuel H. Sibley, II
William A. L. Sibley, Jr., West Point Mfg. Co.
Jefferson F. Stewart, Military
Billy S. Swilley, J. P. Stevens & Co., Inc.
Myron B. Waits, Jr., J. P. Stevens & Co., Inc.
J. Q. Wright, Aldora Mills
Jesse C. Yow, Jr., Pacolet Mfg. Co.
William T. Lee, Whittier Mills Co.
Gary E. Deiters, Chemstrand Corp.
Thomas G. Ellington, Jr., Du Pont
Harley B. English, Chemstrand Corp.
Robert C. Moore, Chemstrand Corp.
Max L. Spruell, American Thread Co.
Oscar M. Anderson, Military
Victor A. Arrieta, United Merchants & Mfgrs.
William C. Beasley, Greenville Mills, Inc.
James A. Butler, Jr.
James E. Haynes, Jr., Callaway Mills Co.
Herman A. Kamparosyan, B. F. Goodrich Chem. Co.
Gary E. Keeble, Taylor Instrument Co.
Thomas E. McBrayer, Holeproof Hosiery Co.
Enman J. Sheppard, Jr., Celanese Corp.
Daniel J. Davis, Dow Chemical Co.
Harry L. Dukes, Military
Ivan H. Gordon, Talbott Mills

INSTITUTE OF TEXTILE TECHNOLOGY

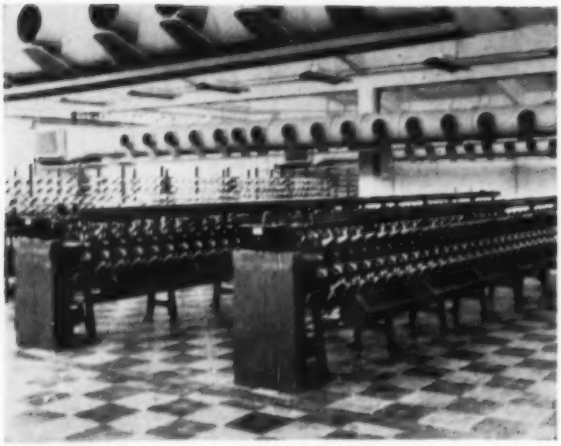
William R. Etchells, American Thread Co.
Ben R. Fox, Inman Mills, Inc.
David R. Gentry, West Point Mfg. Co.
Andrel K. Helms, Dow Chemical Co.
William D. Hicks, Fieldcrest Mills, Inc.
Thomas F. Joyce, United States Government
John E. Lancaster, Standard-Coosa-Thatcher Co.
Joe F. Mattison, American Thread Co.
Warren P. McHugh, Chemstrand Corp.
Edward F. Mello
William O. Stone, Jr., Fieldcrest Mills, Inc.

LOWELL TECHNOLOGICAL INSTITUTE

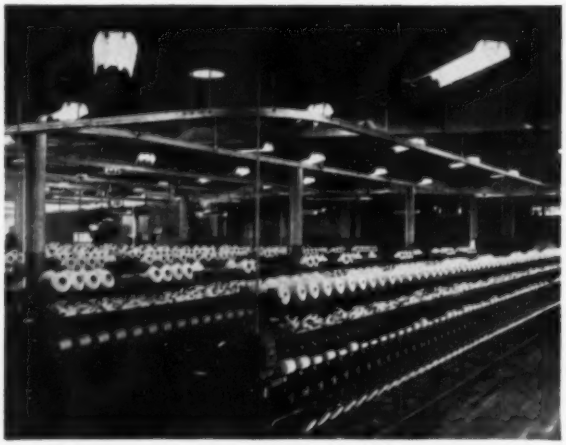
Chris Chingros, Falulah Paper Co.
Leonard T. Coppeta, LTI Graduate School
Carmen F. Genzabella
Chris Kapetanakis, National Aniline Corp.
Robert H. Keenan, National Aniline Corp.
Leonard Lifland, Textile Research Institute Graduate School
John J. O'Keefe, National Lead
Abraham O. M. Okorodudu, Brandeis University Graduate School
Rino L. Pellissier, Military
Therese A. Polak
John T. Roddy
Roger B. Rondeau, Military
Richard E. Sawyer
John H. Scaringi
Robert C. Schick, U. of N. H. Graduate School
William Spielman, Military
Harry N. Tobler, LTI Graduate School
Adolphe A. Traversy
Ruben L. Abadi
Yervant E. Annaian, Raytheon Mfg. Co.
Joseph J. Bellemore, Institute of Textile Technology Graduate School
Martin L. Bristow, Military
George A. Cherry
H. Kenneth Cohen, Military
James A. Condon, Raytheon Mfg. Co.
Ronald A. Francoeur, Raytheon Mfg. Co.
Warren E. Goddard, B. F. Goodrich Co.
Roman Golbin
Gerald F. Harlam, Military
Richard A. Heiden, F. C. Huyck & Sons Co.
Chawl Whan Kim
Vincent W. Kulickowski, Jr., Military
Jacob T. Litt
Frank V. Mann, Military
Leonard J. Miller
Lewis H. Miller, Military
Peter G. Popper, Massachusetts Institute of Technology Graduate School
Philip C. Swain, Goodyear Tire & Rubber Co.
Ricardo Villa Escalera
Robert P. L. Yung
Walter C. S. Yung
Arthur J. Berkowitz, Military
Gerald E. Boches
Philip E. Burgess, American Cyanamid
Carlos A. Ceppas
Frances S. Delaney, Mohasco Industries
Richard B. Engel, Phillips-Jones Co.
John C. Ferenbach, Jr., Dominion Textile
Louis S. Goldberg, Onyx Oil and Chemical Co.
Allen A. Gwinnell, Berkshire Woolen
Yashvant C. Jariwala, Waumbec Mills
Joseph W. Lahood
Donald E. Levin
William P. Mahoney
Richard T. Meserve, M. T. Stevens & Sons Co.
Plymouth D. Nelson, Litchfield Woolens

(*Continued on page 133*)

Leesona ROTO-CONER®
—the winding way around the world

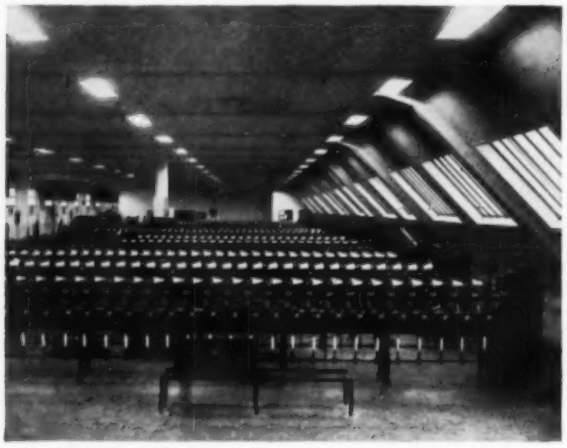


URUGUAY — Roto-Coners set up to wind onto paper cones. Machines are equipped with round bobbin boxes.



U. S. A. — Roto-Coners winding parallel tubes on one side, cones on the other.

GREAT BRITAIN — Roto-Coners winding open-wind knitting cones.



FRANCE — Roto-Coners coning 100s — 120s cotton yarn.

Every textile manufacturing country in the world uses Leesona Roto-Coners in quantity.

These quiet, trouble-free drum winders produce every type of open-wind package. They wind onto paper tubes and cones for shipment or knitting . . . onto cork-covered, wood cones for warper creels . . . onto perforated tubes and springs for dyeing . . . onto wood tubes and cones for twisting.

Around the world they wind cottons . . . spun synthetic staples . . . wools . . . worsteds . . . linens . . . blends.

The exclusive *Rotary Traverse* on these machines eliminates all moving parts connected with reciprocating guides — permits high speed, reduces maintenance, and assures uniform packages and top quality yarn.

For facts and figures on why these versatile, dependable machines are popular around the world, write for the illustrated Leesona Roto-Coner booklet.

23.6.14

UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Sales Offices: Boston • Philadelphia • Utica • Charlotte • Atlanta • Los Angeles
Montreal • Hamilton, Canada

Agents in every principal textile center throughout the world.

Lowell graduates continued
Cornelio B. Sarangaya
Richard A. Silver, Military
Bernard J. Stein, Military
Jo Van der Linden
Howard M. Zins, Firestone Tire and Rubber Co.
Peter C. Canovai, Du Pont
Allen A. Denio, Du Pont
Edward W. Makuch, Davis Mills
David M. Hannon

NEW BEDFORD INSTITUTE OF TEXTILES AND TECHNOLOGY

Joseph Costa, Military
John J. Harrison, Sperry Gyroscope
Paul D. Malcolm, Military
Daniel J. Morrison, Military
Barry G. Robbins, Military
Gerald Anthony, Jr., Military
James R. Ashworth, Military
Delmar D. Clough, Military
John E. Foster, Jr., Military
Robert P. Frates, Sperry Gyroscope
Robert E. Griggs, Carrier Corp.
Edward Jarecki, General Electric Co.
David C. Leite, Western Electric Co.
Edward Leite, Sperry Gyroscope
Angelo M. Mello, Military
George C. Montini, Goodyear Tire & Rubber Co.
Charles J. McCarthy, Military
Ronald A. Nichols, Military
John Pacheco, United Shoe Machinery Corp.
Armando V. Pedroso, General Tire & Rubber Co.
Walter A. Slocum, Military
Gerald Smith
Robert Staples, Military
Gerard Swain
James A. Wolstenholme, Sperry Gyroscope
George R. Talbot, Sperry Gyroscope
Manuel M. Bandarra, American Bemberg
John R. Bernier
Henry Galary, Institute of Textile Technology
William E. Giblin, Goodyear Tire & Rubber Co.
Leo E. Grenier, Roje Mills
Allan M. Konner
Talsop Lee
Joseph N. Lemos, J. P. Stevens & Co., Inc.
Paul S. Marois
Peter Smith, Military
Geraldine Barros
John M. Canto, Bridgewater State Teachers College
Collette L. Lemaire
Patricia Schroder
Arthur E. Davidian, Wamsutta Mills
John J. Walsh, Berkshire-Hathaway
Saul Lapidus
Joseph R. Blanchette
Paul N. Gauvin, Providence College
James H. Gifford, Firestone Tire & Rubber Co.
Mary Ann Hanrahan
Barbara R. Lavigne
Joseph P. Marco
Ralph O. Moyer, Jr., National Carbon Co.
James M. Pasquill
Joseph A. Power
Mona L. Ricard, Bridgewater State Teachers College
Raymond L. Richard
Roy Serpa, Amoco Chemicals Corp.
Augustine Silveira, Jr., University of Mass.
Barbara A. Staron
Gustavo D. Diez
Daniel J. McGrath
Mary Coutu
Rene F. Gagne
Harvey S. Pentleton

NORTH CAROLINA STATE COLLEGE

M. S. Anwar
H. M. Ayyub
W. R. Britland, Jr., American Cyanamid Co
G. L. Deviney, Hatch Mills
C. J. J. Escobar
R. J. Gomez
W. J. Griswold
J. M. Heustess, Burlington Industries
H. C. Hicks, Military
A. O. Holland, Jamestown Mills
P. Lamsam
L. R. Lefkowitz, Graduate work
P. E. Lipe, Jr., Linn Mills
J. F. Locklear, Pacific Mills
J. H. Miller, Stonecutter Mills
C. F. Nimmo, Jr., Burlington Industries

N. C. State graduates continued
K. Rahman, Graduate work
F. M. Rawicz, Graduate work
R. F. Rhyne, Allied Chemical & Dye Corp.
M. I. Shaikh, Graduate work
A. K. Syal
A. R. Adamjee
R. M. Bell, Procter & Gamble
D. S. Bernzweig
F. E. Bozeman, J. P. Stevens & Co., Inc.
P. G. Braxton, Military
R. C. Britt, Cone Mills
G. T. Brooks, Military
H. W. Buchanan, Collins & Aikman
L. S. Buff, Cone Mills
B. E. Bunker, Military
G. E. Carter, Du Pont
A. J. Cassuto, Military
J. Chappell, J. P. Stevens & Co., Inc.
H. F. Cherkas
D. T. Church, United Elastic Corp.
J. W. Copeland, Fieldcrest Mills
J. A. Corbett, Kendall Mills
A. W. Craven, Springs Cotton Mills
R. W. Crowe, J. P. Stevens & Co., Inc.
J. A. Driggers, Chemstrand Corp.
W. R. Felts, Cone Mills
C. H. Fisher, Military
W. S. Fulton, Morgan Mills
V. H. Garrou, Waldensian Hosiery Mills
R. I. Giddins, Interstate Dress Carriers
W. R. Greene, J. P. Stevens & Co., Inc.
B. J. Griffin
A. J. Grunfeld, Du Pont
J. W. Hamrick, Reeves Bros.
W. H. Hawkins, J. P. Stevens & Co., Inc.
J. C. Hinson
D. E. Hitchcock, Military
J. W. Holmes, Military
B. L. Hubbard, Goodyear Aircraft Corp.
M. M. Johnson, Military
R. C. Jordan, American Cyanamid Co.
J. L. Law, Dow Chemical Co.
Helen B. Liske
J. L. Lowe, Chatham Mfg. Co.
R. L. Luckenbach, Du Pont
P. E. McKenzie, Chemstrand Corp.
K. L. McKinney, Cone Mills
J. P. Marshall
H. S. Martin, Chatham Mfg. Co.
C. F. Mauney, Du Pont
R. L. Morrow, Burlington Industries
R. F. Mozur, Industrial Rayon Corp.
J. D. Myrick, Owens Corning Fiberglas Corp
V. T. Novak, Rohm & Haas
A. H. Oremland, Military
D. L. Owens, Chemstrand Corp.
C. R. Patterson, Fieldcrest Mills
F. Pelenz, Jos Bancroft & Sons
J. C. Ploch, American Cyanamid Co.
A. L. Potts, Chatham Mfg. Co.
E. L. Pyatt, Chemstrand Corp.
W. T. Rankin, Goodyear Tire & Rubber Co
S. H. Ritter, Military
G. W. Roberson, Burlington Industries
N. D. Rosenstein, Military
G. B. Sarafidis
D. E. Shreffler, Military
R. F. Schroeder, Wellington Sears
W. D. Shipman, Chemstrand Corp.
G. R. Shirley, Carolina Mills
H. P. Short, Jr., Dan River Mills
W. R. Simmons, United Elastic Corp.
C. W. Smith, J. P. Stevens & Co., Inc.
D. H. Smith, Military
M. R. Steelman, Jr., Military
D. B. Theodoridis
M. H. Traumuller, Knitcraft, Inc.
D. W. Tuttle, Chemstrand Corp.
L. D. Underwood, Cone Mills
W. A. Underwood, Roberts Co.
J. Waddington, Jr., J. P. Stevens & Co., Inc
T. W. Whitehead, Military
K. C. Williamson, Timme Corp.
B. B. Davis, Pacific Mills
R. E. Hatcher, Reeves Bros.
N. M. Lazzo, Carbide Chemicals Co.
P. E. Sylvester
C. F. Wilmeth, Jr., L. P. Muller Co.
N. R. Futterman, Burlington Mills

PHILADELPHIA TEXTILE INSTITUTE

Howard I. Berman, U. S. Government
Charles H. Bethel, United States Rubber Co.
Edward Black, Military
Coleman M. Brandt, M.B.A. Harvard
Carl I. Carlson, Jr.
Robert Cohen, Arco Garment Co.
David E. Cox, United States Rubber Co.
Robert C. Donaldson, National Aniline Co.
Harry A. Freedman
Frederic L. Gittelson
Donald A. Glovich, A. & M. Karagheusian Co.
Arne J. Goldstein, Military
Ivan H. Goodman, Interchemical Corp.
Murray Greisman

PTI graduates continued
Isaac P. Guberek, Industrias Guberek
Jeroid Hepenheimer
Edwin A. Johnson, Geigy Chemical Corp.
Donald E. Kaufman
Claude A. Kennedy, Jr., Raybestos-Manhattan, Inc.
Evangelos Koutroubinis
Maung Tin Kyaw, Government of Burma
Jerome H. Lacheen
Gary Lasdun
Stanley P. Leffler, Crompton & Richmond
Steven J. Leibler
Joel Levitt
Raymond F. McCaughey, Sr.
Octavio A. Martinez, Banfaic
Gonzalo M. Bedoya
Alan B. Mernick, Rockland Bleach & Dye
B. Michael Merns, Merns, Inc.
Leslie B. Morgenstern
Khan Naseruddin
Hans J. Neumann, "Sedafina"
Gordon S. Orlow, Gimbel Bros.
Sukhlal S. Parekh
Mohammad I. Parwez
Yalcin Peker, Graduate Student Ga. Tech
Gury Poletajev, James Lees & Sons Corp.
Gilbert G. Roseman
Leslie M. Rubenstein
Stephen P. Selwyn, Textile Specialties
Edwin G. Sielewics, F. C. Huyck & Sons Co.
Eugene J. Sterling, Ladd Knitting Mills
LeRoy E. Swing, National Aniline Corp.
Maung T. Tan
J. Robert Wagner, F. C. Huyck & Sons Co.
Robert D. Walters, Hess, Goldsmith & Co.
Maung Win
Ta-Kwan Wue, Phila. Textile Inst. Faculty
Saul W. Yellin, Bel-Mar Knitwear
Sheldon Zaretzky, Newcastle Fabrics
Ronald A. Brandt
Attila Celikis, Graduate Student Ga. Tech
Richard Chwatt, Chwatt Bros. Dye Works
Jerald T. Cooper, Princeton Knitting Mills
Harry J. Emore
Morey Kaplan, Phila. Textile Inst.
Mark L. Kay, Aldon Rug Mills
Maung H. Kyi
Mark A. Minatelli, Jr., Kendall Co.
Elwin C. Penski, Massachusetts Institute of Technology
Rauf Tabani, Returning to Pakistan
George E. Adams, Jr., Geigy Chemical Corp.
Edvardo J. Baboun, Returning to Chile
Pierluigi Bassano, Returning to Ecuador
Isaac J. Brandwayn, Returning to Colombia
Robert M. Dixon, F. C. Huyck & Sons Co.
Paul I. Goda
Habie H. Sheikh, Returning to India
Harvey J. Hoffman
John Pappas
Fu-Kan Tjian, Moss Rose Mfg. Co.
Bernard G. Toll, Pratt
Richard M. Weinberg, Banner Yarn Dyeing Corp.
Pedro Weiser, Returning to Ecuador
Mitchell A. Wollman, Wollman Mills, Inc.
Arnold C. Steinberg, Stonehill Ktg. Machine Co.

RHODE ISLAND SCHOOL OF DESIGN

Raymond B. Allen, Jr., Factory Mutual Insurance Co.
Damiano E. Caramante, Graduate Study ITT
Edward W. Costa
Donald J. Cox
Yoon-Chai Lee, Graduate Study, N. C. State College
Herbert J. Riley, Chemstrand Corp.
Eugene W. Tilleux, Graduate Study
James R. Young, Graduate Study ITT
Paul P. Paiva, George C. Moore Co.

ECOLE DES TEXTILES DE LA PROVINCE DE QUEBEC

Jean-Claude Banville, Goodyear Cotton of Canada Ltd.
Joseph Edouard Belanger, Glendale Spinning Mills Ltd.
Claude Boisvert, Lasalle Knitting Ltd.
Jean-Eudes Cavanagh, Dominion Textile Co., Ltd.
Jean-Claude Cote, Du Pont of Canada Ltd.
Augustin Coupal, Dominion Textile Co., Ltd.
Roger Dame, Canadian Celanese Ltd.
Rene Desrochers, Quebec Iron and Titanium
Robert Gaudreau, Duplan of Canada Ltd.
Andre Laurent, Le Rouet Limite
Jean-Berchmans Letourneau, Canadian Celanese, Ltd.
Denis Morissette, Dominion Textile Co., Ltd.

Clear sparkling colors produced with more economical dyestuffs are among the advantages assured by use of TEN-O-FILM Starches.

For a clear size that enhances **COLOR** use **TEN-O-FILM**® starches

For use with the new quick curing or polymerizing resins, you'll find no equal to TEN-O-FILM Starches.

Available in a range of fluidities to meet any required fabric stiffness, these unique starches retain their free-flowing characteristics at the lower temperatures employed in finishing.

Also, because both sizing and desizing operations using TEN-O-FILM are conducted at lower temperatures, with "bleeding" thereby reduced, yarns can be dyed with more economical dyestuffs.

More information? Just contact our nearest sales office or write to:

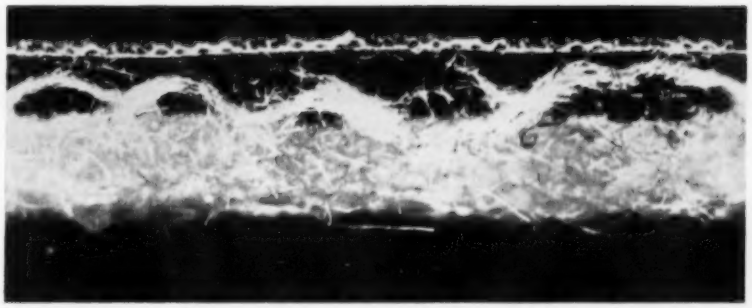
CORN PRODUCTS SALES COMPANY
17 Battery Place, New York 4, N. Y.

Corn Products makes these famous starches for the TEXTILE INDUSTRY:
EAGLE® · FOXHEAD® · GLOBE® · HERCULES · TEN-O-FILM® · GLOBE® Dextrines

Designs warmer and lighter cold weather fabric

■ A fabric which is said to be completely waterproof and windproof, light in weight yet providing adequate ventilation and preventing condensation, has been developed by Joseph Kagan of Kagan Textiles Ltd. in England, the British Information Services reports.

Based on the established principle that air trapped in clothing provides warmth to the wearer, the design of this fabric is such that built-in air channels are formed which hold air between the fibers and provide a heat-retaining layer around the body (see accompanying photo). According to the announcement, this means that "Gannex" (the name by which the new cloth is known) can furnish greater warmth than a conventional wool cloth of equal weight, thus providing comfort in the bitterest weather.



Photomicrograph of Gannex cloth cross section showing the filling at the bottom, the fiber in the middle, and outer layer at the top. Fiber joins the filling to the outer layer; it is fused or "spot-welded" to the outer layer at intervals, leaving open spaces where air is trapped.

At the same time, the manufacturer says, the cloth's ventilating properties are important, because they prevent the condensation which normally occurs in most waterproof garments, with a resulting heat loss.

The firm reports that Gannex accommodates the see-saw temperatures so that the wearer's surface skin temperature will not materially alter when he moves from warm to cold air. It retains its insulating properties even when exposed to heavy rain; and when a garment made from the fabric is wet, it is much lighter than a conventional wool.

Furthermore, the fabric will neither crease nor pull out of shape, nor will it contract or expand when wet, the maker claims.

Market research *(from page 102)*

search Section.

Perhaps the most important question presented to the panel, one that has been discussed throughout the industry in recent months, "What is your opinion of the possibility of trying to expand over-all textile consumption through an industry-wide campaign involving all fibers?" was discussed at great length by Ed Lipscomb. He stated that the Cotton Council was interested in the over-all expansion of textile consumption as this would benefit cotton, which now accounts for roughly twice the consumption of other fibers. However, he said, "We do not believe that the answer lies in an all-fiber, all-product textile promotion."

Believing that a different approach should be pursued, Mr. Lipscomb began by contrasting the textile industry's expenditures for promotion, which in the most widely promoted area amounts to only about 3/10 of 1% of income, as against the food industry's 3%. Moreover, the food industry does not maintain a campaign as such for greater food consumption; rather, the dairy, milk, citrus, and other food industries aggressively push their own products.

Similarly, Mr. Lipscomb went on, the automobile industry does not advertise to sell more cars—the individual automobile producers advertise their own products with special emphasis on each.

Due to the multiplicity of products and the increasing number of fibers produced by the textile industry, the problem of promoting them as a unit would become complex. Promoting all fibers under one unified program would mean that only "those virtues and consumer benefits which are common to all" could be emphasized, with the resultant exclusion of any special virtue or peculiar strength of any one fiber.

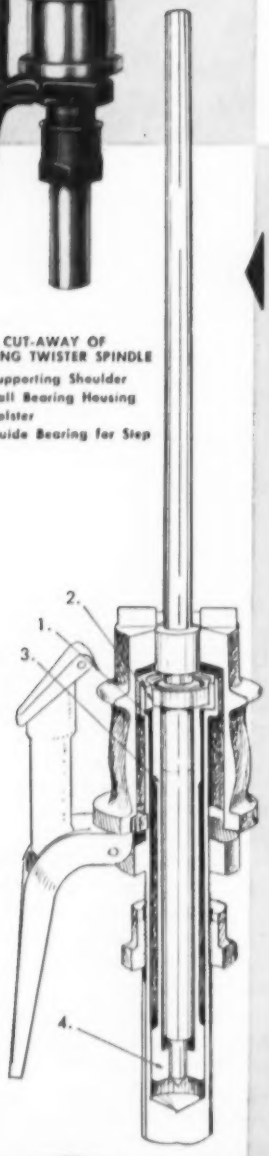
To illustrate this point, Mr. Lipscomb cited that women look for four things when buying apparel and household fabrics, one of which is dependability from the standpoint of washing, ironing, etc. A unified campaign could not make claims for washing, for example, unless they could be met by the weakest fiber.

In summarizing, Mr. Lipscomb said, "We expand the total market by expanding the individual pieces which make up the total." And "the very first step toward this job of expanding the total market is a comprehensive market research job which will give a sense of direction, both as to the markets where possibilities are greatest and as to the things which must be done, whether through promotion or not, to gain consumption."

Improve your Twister Operation with SACO-LOWELL SPINDLES

A SIZE AND TYPE FOR ALL CONDITIONS, EACH DESIGNED TO—

- CARRY LOADS AT HIGH SPEED.
- RESIST INCREASED RADIAL THRUST AND UNBALANCED LOADINGS.
- OPERATE FOR LONG PERIODS WITHOUT REPAIRS AND REPLACEMENTS.



CUT-AWAY OF BEARING TWISTER SPINDLE

1. Supporting Shoulder
2. Ball Bearing Housing
3. Bolster
4. Guide Bearing for Step

SACO-LOWELL BALL BEARING SPINDLES

The Saco-Lowell ball bearing spindle is fitted with a precision ball bearing designed to receive both radial and thrust loads. A special type bolster is supported by an accurately machined shoulder. Oil is circulated through oil slots in the bolster for the dual purpose of lubrication and as a dampening agent. A bearing at the foot of the bolster acts as a steady rest, but carries no thrust load.

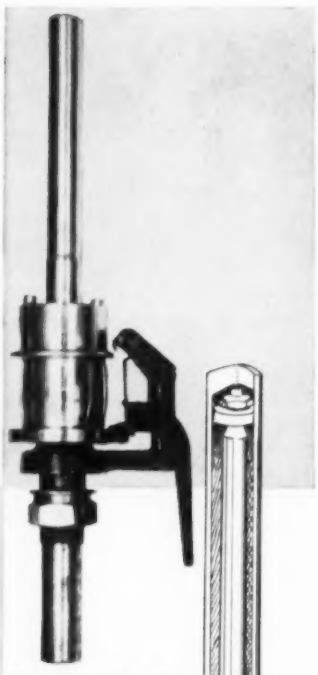
SACO-LOWELL NEW ERA SPINDLES

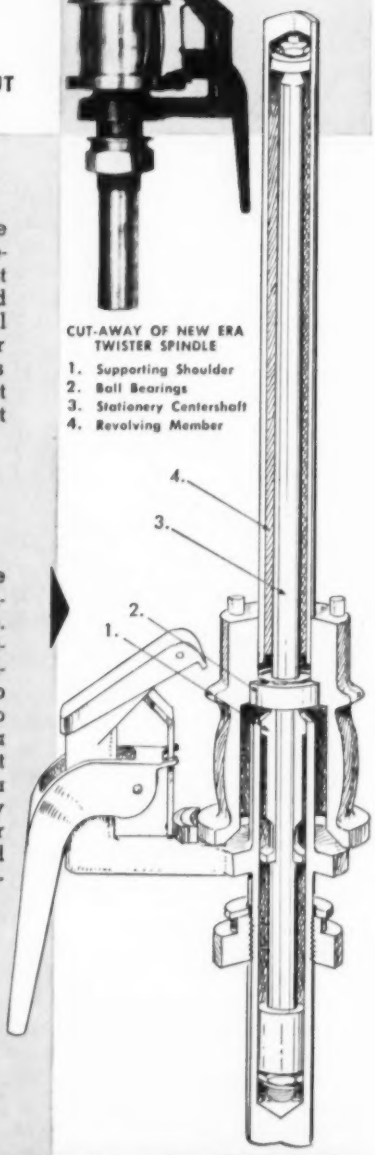
New Era Spindles have at least twice the loading carrying ability of their conventional counterparts. The No. 2 and No. 5 oil-cushioned spindles, for use on existing twisters, are mounted in a standard-type base. The base is filled with oil to act as a damper and cushion to absorb vibrations. All Saco-Lowell New Era Spindles are equipped with efficient brakes. New Era Twister Spindles effect a considerable saving in power, generally from 25% to 30%. They are much cleaner and do not cause oil stained or smudged yarn and the tapes last longer. Maintenance costs are substantially reduced.

Also Available:

FEASTER SPINDLES with specially designed bolster spring, which, with the ball and socket bearing, allows spindle to find its true axis of rotation while absorbing internal shocks and stresses.

PLAIN BEARING SPINDLES—an economical replacement where speeds and loads are not excessive.





CUT-AWAY OF NEW ERA TWISTER SPINDLE

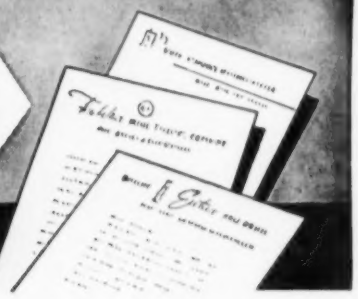
1. Supporting Shoulder
2. Ball Bearings
3. Stationery Centershaft
4. Revolving Member

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

HOW OTHER MEN MANAGE



• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editors "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

A way to set spinning doffer loads

EDITOR TEXTILE INDUSTRIES.

Recently I conducted a series of studies in our plant which led to the adoption of a "rigid" doffing schedule for our doffers. Previously our doffers had been free to doff their jobs as the frames filled up. Naturally the frames "ran together" and frequently there was much lost time among the doffers as they waited for the frames to become full. Also there was much lost production as the frames stood (often in groups) waiting to be doffed.

I began the study by determining the amount of time the doffers needed to doff a frame of any given length. Since our doffers also sweep the areas about their doff jobs twice per shift, I had to allow plenty of free time from doffing to permit the men to do their cleaning. Our doffers also lay the roving up on five frames.

It turned out that the doffers need 20 minutes per frame in doffing a frame with 352 spindles which, incidentally, fills up each 220 minutes.

To establish the system, job by job, I started each doffer in turn on any one frame, which for the records I marked as frame No. 1. Twenty minutes after the doffer began to doff the first frame he was instructed to start doffing the second frame. Proceeding in this manner the doffer finished his doffing cycle.

A frame which fills up with yarn every 220 minutes, and which requires 20 minutes doffing time, cycles every four hours, or 240 minutes. This means that a given frame must be allowed a total doffing and running time or 240 minutes between the time it is stopped for doffing at one doff, and the corresponding point of the succeeding doff.

For example, a frame stopped for doffing at 7:00 a.m. will be ready for doffing at 11:00 a.m. Consequently, it was easy in this instance to stop the doffing cycle at

Win $100 HURRY! HURRY! HURRY! **Win $100**

Kink Contest Closes August 15, 1957. Send Your Entry Now!

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance, and the $100 award will be made to the winner as soon as all entries are judged.

The contest rules are simple:

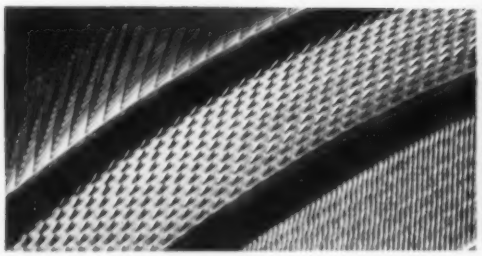
► All contributions must be postmarked not later than midnight, August 15, 1957.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: The Editors, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 8, Georgia.



CARDER'S CORNER by Ashworth

CARDERS!! The purpose of this page is to serve as an open forum each month. If you have problems which you would like to throw open for discussion or if you have further comments on problems already presented, write to CARDER'S CORNER, care of Textile Industries, 806 Peachtree Street, N. E., Atlanta 8, Georgia.

Volume I, Number 8

RAISED OR BLISTERED FILLETS

Every now and then the question arises as to the causes of raised or blistered fillets. Accordingly, we repeat what we have previously published on this subject.

It is sometimes difficult to distinguish between a raised or blistered and a ply separated fillet, unless the fillet has been removed from the card. Invariably, responsibility for the former lies with the mill's personnel; whereas, ply separation indicates faulty construction or manufacture of the fillet foundation.

Probably, more raised fillets are caused by worn cylinder bearings* than by anything else, although thin places in the laps or jerked-in tail ends run a close second. Other causes are as follows:—

1. Lickerin bearings and shrouds with combined wear of more than .007". Lickerin contacts the cylinder, resulting in "shelled out" wire and blistered fillet.
2. Poorly set plates, which contact the cylinder wire.
3. Worn doffer bearings and shafts, which allow cylinder and doffer to contact, face and sometimes blister each other.
4. Card web following the doffer and building up.
5. Card out of line and level. Cylinder rubs against frame, expands from heat and causes facing and eventual blistering of fillet.
6. A hot cylinder bearing on either side of the card. Expansion of the metal closes space between cylinder and flat or doffer clothing, causing faced or raised fillet.
7. Flats dragging on front and back plates because of worn sprocket shafts and/or worn chains. Loosened flat wire lays down under the grinder, only to rise when card is put to work. Contact with cylinder wire, if prolonged, may eventually cause blistered fillet.
8. If the roll for cleaning out impacted waste is improperly used, it will cut into the top ply of the flat foundation, loosen the wire with the same result as in Paragraph 7.
9. When tail ends of laps are jerked into the card they bruise and distort the wire, also frequently push the wire under the foundation, causing a raised or blistered fillet.
10. Worn feed roll shafts and bearings which permit thin places in the lap to be jerked through. Results as noted in paragraph 9. Where thick places are present, less pressure is exerted on the thin portion and the lickerin plucks this and "slams" it against the cylinder.
11. Poorly repaired and/or poorly set cylinder screens can rub the cylinder wire to the extent that the fillet is blistered.
12. Card fly, building up in and beyond the lickerin mote box section is sometimes plucked in such quantities as to cause a fillet to become blistered. Chokes at the sides of the card have also been known to generate enough heat to cause expansion with resultant closing up of settings and facing and raising of the clothing.

*Cylinder bearings should be replaced when wear exceeds .010".

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Philadelphia*†‡ Atlanta†‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)
Los Angeles‡ (E. G. Paules)

*Factory †Repair Shop ‡Sales Office

3 Factories • 6 Repair Shops • 7 Sales Offices

PRODUCTS AND SERVICES

Clothing for Cotton, Wool, Worsted, Silk, Synthetic Fibre and Asbestos cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire. Lickerins and Topflats Reclothed.

Ashworth PIONEERS IN CARD CLOTHING

3 FACTORIES • • • 6 REPAIR SHOPS • • • 7 SALES OFFICES

10:20 a.m. to allow time for the doffer to perform his sweeping and roving duties. Then promptly at 11:00 a.m. he was ready to start doffing No. 1 frame again.

Naturally some of the doffing jobs did not fall into place so easily.

The system works only when it is executed according to plan. If a frame is broken down for a time, or is stopped for any reason, other than doffing, it still must be doffed on schedule regardless of how little yarn is on the bobbins. If a frame is down for an entire doffing cycle, it must be by-passed of course, but the doffer must wait until the next frame is scheduled to be doffed before he stops it. Otherwise the entire schedule will be ruined.

Our doffers are paid on a hank basis, so the new system works to their advantage in that the men enjoy the maximum hanks possible from their jobs. There still is much waiting, and many lost hanks, on the jobs we have not set up on the rigid system. The doffers on these jobs are eager to adopt the change.

A doffer's job on 352-spindle frames, filling up every 220 minutes, can be broken down as indicated below:

Frame Number	Doffing Schedule
1	7:00 a.m.
2	7:20 "
3	7:40 "
4	8:00 "
5	8:20 "
6	8:40 "
7	9:00 "
8	9:20 "
9	9:40 "
10	10:00 "
11	10:20 "

A break of 40 minutes is scheduled to begin after frame No. 11 is doffed. The second round of doffing begins promptly at 11:00 a.m.

Frame Number	Doffing Schedule
1	11:00 a.m.
2	11:20 "
3	11:40 "
4	12:00 M
5	12:20 p.m.
6	12:40 "
7	1:00 "
8	1:20 "
9	1:40 "
10	2:00 "
11	2:20 "

CONTRIBUTOR NO. 9028
(Canada)

HOW OTHER MEN MANAGE

Tip for weavers of metallic yarns

EDITOR TEXTILE INDUSTRIES:

On our W-3 looms we were running a 4s yarn in one shuttle, and a light Lurex yarn in the other shuttle. When we set our wire feelers for the 4s yarn the feeler would cut the Lurex when the 4s were doffed. When we set the feelers for the Lurex yarn the loom would dump butts of the 4s yarn.

We removed the feeler and with fine sandpaper smoothed about ¾ of the tip. Then we cut two very fine teeth in the tip on the side next to the end of the loom. The fine teeth do not cut the Lurex and yet hold adequately.

CONTRIBUTOR NO. 8919

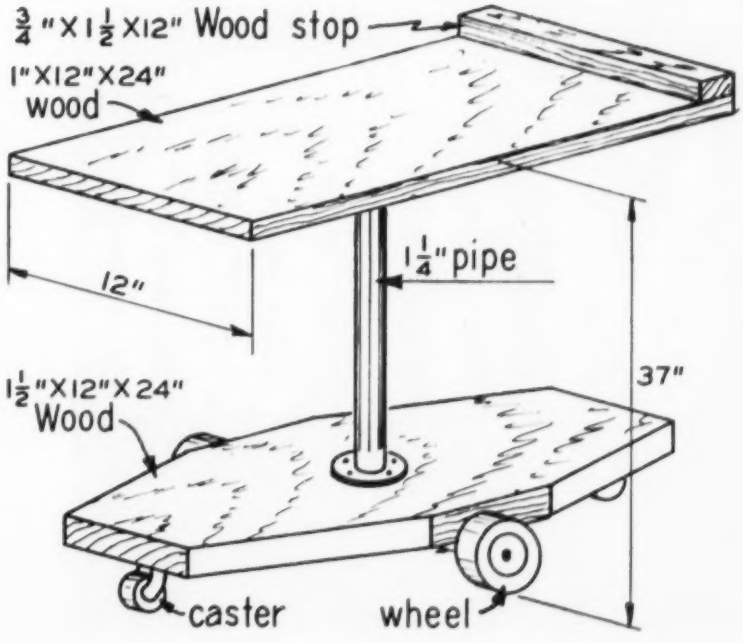
Inexpensive mill-made truck for battery fillers

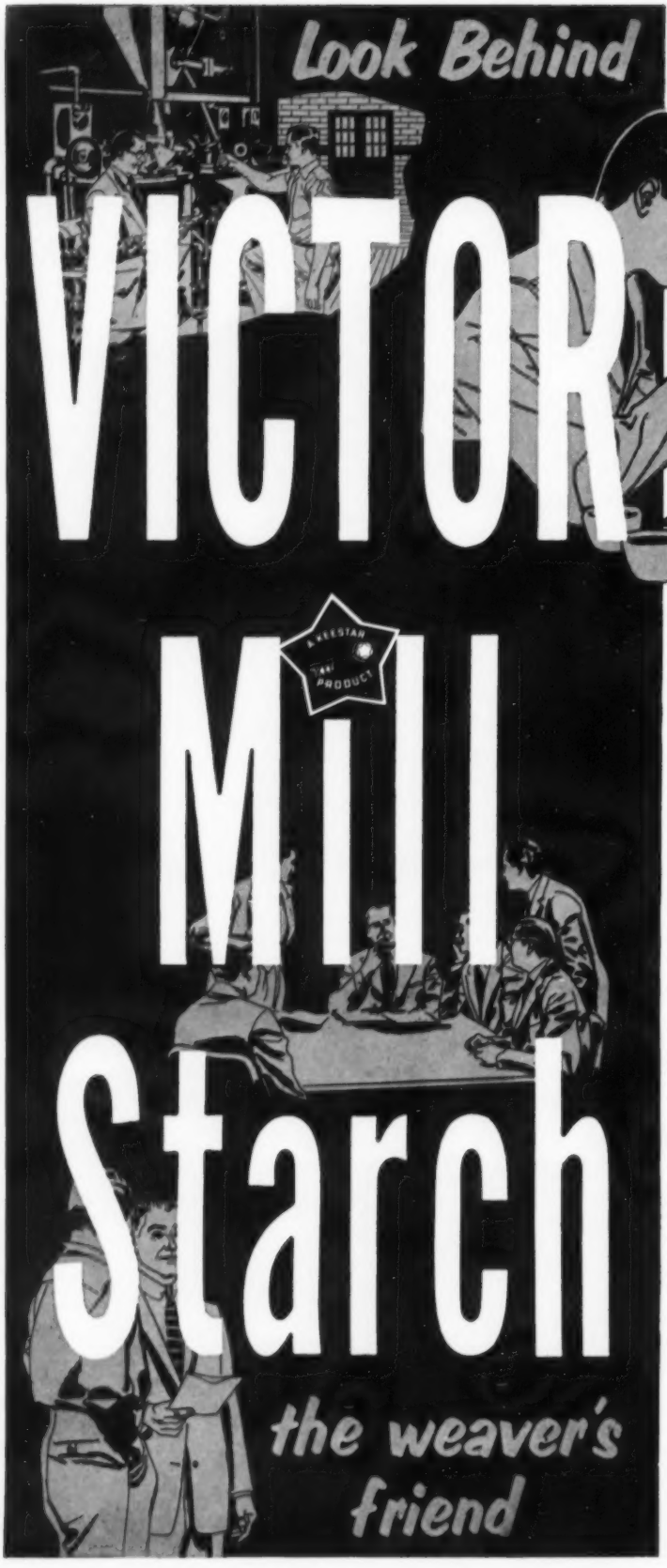
EDITOR TEXTILE INDUSTRIES:

A battery hand truck which holds a single box of filling can be made from the members as shown in the accompanying drawing. The upper and lower parts are of wood. A 1¼" pipe equipped with flanges is used as the post to support the upper deck.

The length of the pipe varies according to the size of the wheels used — the over-all height is 37". All the boxes in our weave room are placed on large tables near the walls (there are six such tables in the room), and the battery fillers load their trucks from these storage places. We prefer this system because we can keep the weave room uncluttered of floor stands, loom boxes, etc. Our spinning doffers stack the filling in the boxes as they doff.

CONTRIBUTOR NO. 8989
(Canada)





Many Minds Are Better Than One

Keever sales-service men know the textile industry. As a trained specialist, each on his own can help you solve most common mill problems.

But the Keever man never works alone. Your success has built our business. That's why all customer problems are thoroughly discussed in staff meetings.

If an answer is hard to find, the combined contact experience of more than 120 years is focused on it – backed by top laboratory technicians in the Keever plant – and in the field.

THE KEEVER STARCH CO.
General Offices – Columbus, Ohio

Processors of corn, wheat and blended starches for industry since 1898

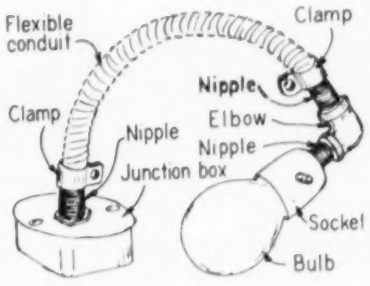
Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
1500 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA

Here's how you can make an adjustable lamp

EDITOR TEXTILE INDUSTRIES:

To make an adjustable lamp for the knitting room shop where the light can be adjusted in different positions for working on stop motions, grinding cams, and other tedious work where focused bright light is necessary, install a round junction box close to the work table. Then bore a ¾" hole through the lid of the box and install a five-inch-long conduit nipple in the hole and secure with lock nuts.

Next, obtain a piece of flexible metal conduit, one inch in diameter, and of the desired length. Slip one end over the ½" nipple and clamp it securely with a 1" metal clamp. Then on the other end insert a nipple two inches long and ½" in diameter into the end of the flexible conduit and clamp it securely with another 1" metal clamp. On the end of the nipple screw a ½" elbow, reduced to receive a ¼" pipe. On this short pipe screw a standard light socket, and attach a halfshield. With the flexible conduit for the light stem, the lamp can be adjusted to any position that is best suited to get the light directly on the work.



CONTRIBUTOR No. 8995

Power-saving knock-off for tensile tester motors

EDITOR TEXTILE INDUSTRIES:

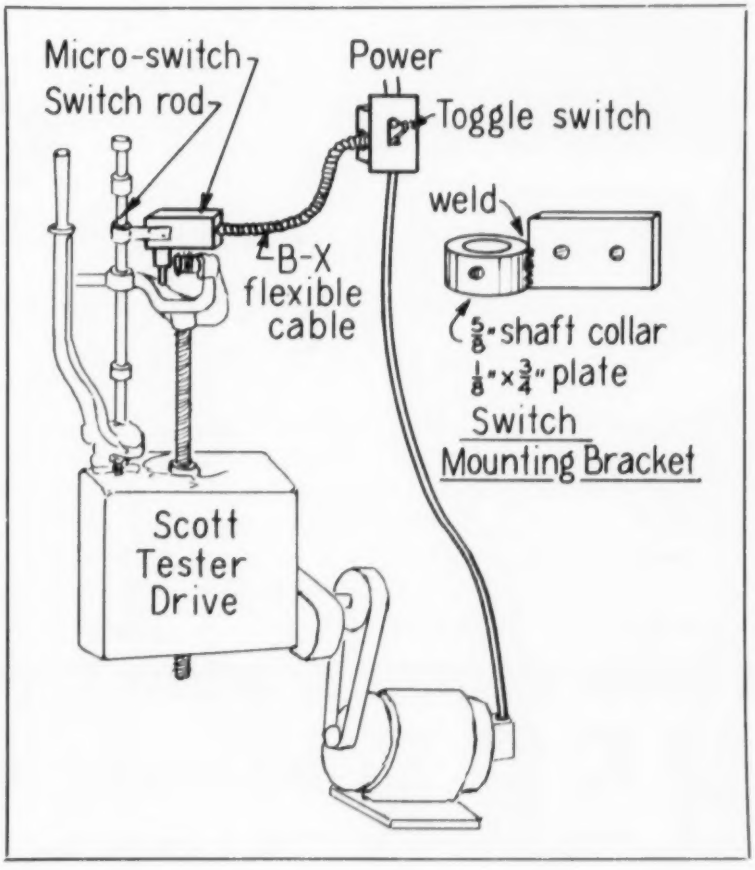
For some time our department has been looking for an electric "slave" to relieve the motions used in starting and stopping the Scott Tester motors. We have tried three-minute time switches and have worn out three switches in a very few months (the testers make more than 108 cycles every 24 hours). The motor was running too much when it was not needed.

I think we have the answer now; and I feel we will get as much service from the Micro Switch as from any toggle switch we used. The Micro Switch has the same action as the switches used in refrigerators.

When pressure is released from the switch plunger, contact is made and the motor will start the carriage and screw for one cycle.

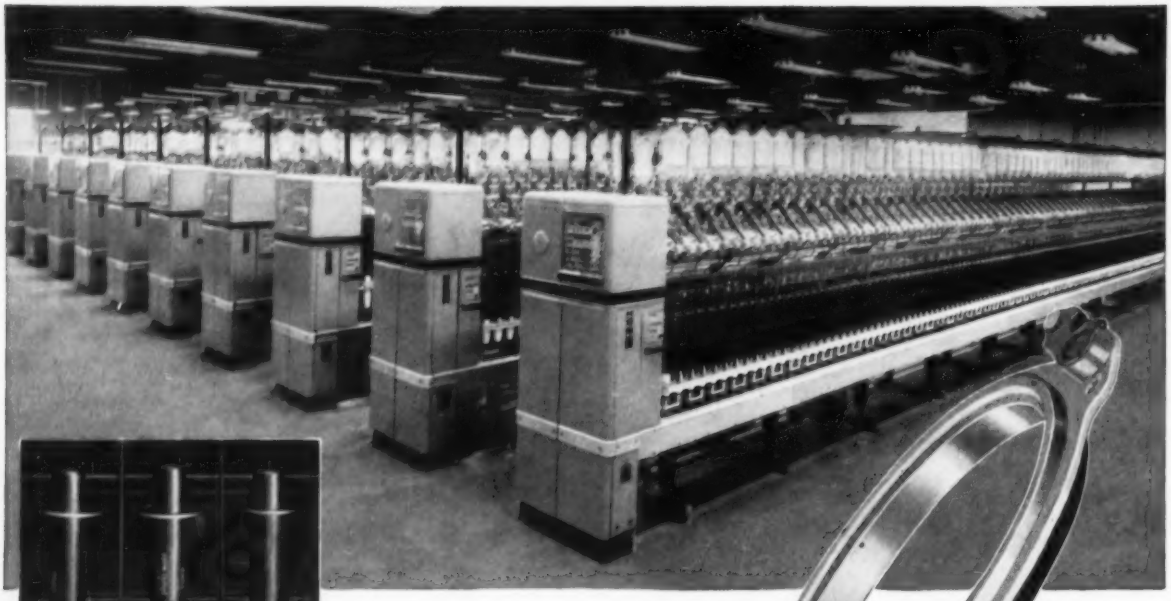
As the carriage returns to the starting position, the plunger is depressed and the motor is stopped until it is needed again. It is a big motion saver as only one control does the complete job.

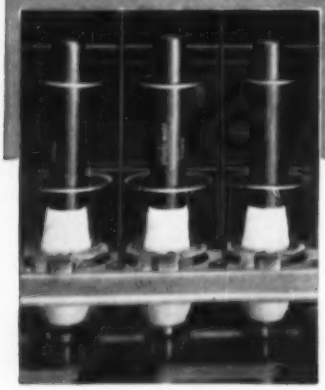
I feel this can be used on a drill press if properly mounted on the spindle return.



CONTRIBUTOR No. 9027

DELAWARE MILLS





Says Mr. William C. Appleton, President of Delaware Mills, Inc., "We are well satisfied with our HERR Conical Rings both on spinning and twisting."

Herr Conical Rings are used on these new Saco-Lowell GWALTNEY Spinning Frames. They are also used on Delaware Mills — Universal Winding Company 10B Twisters.

The HERR Conical Ring provides ideal conditions for the spinning or twisting of any yarn.

Produce High Bulk Orlon at Increased Speeds and with Improved Quality by Using . . . .

HERR CONICAL RINGS

Equip with HERR Conical Rings and begin to enjoy these profit making features. You can speed up production, improve quality and lower costs with HERR Conical Rings. You'll gain too, many other advantages. They stop yarn breakage, permit heavier doffs, produce smoother yarns and reduce fly. You'll enjoy cleaner yarn because oil is not thrown off. Frames and room floors stay cleaner. Travelers last longer because oil is carried in capillaries to ring surfaces. Maximum spindle speeds are achieved.

Learn more about these wonder rings. Write today for descriptive literature.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON AND BLENDED YARNS OF ALL TYPES

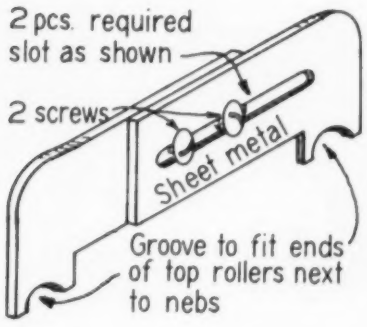
HERR MANUFACTURING CO., INC.

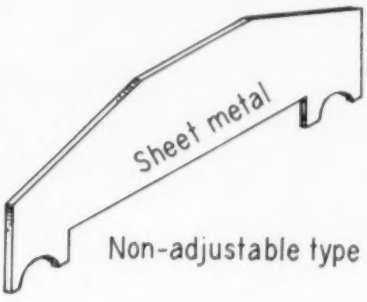
310 Franklin St., Buffalo, N. Y.

Set spinning rolls while frame runs

EDITOR TEXTILE INDUSTRIES:

When the situation calls for setting top spinning rolls, I find the gauges shown here very helpful. They enable the rolls to be set without loss of production — the frame can be set while it runs.



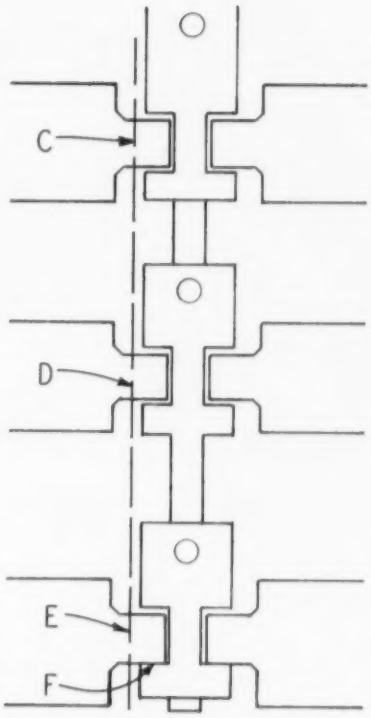


The gauges are made of thin sheet metal, or any other suitable material. Two gauges are shown in the drawing — one is adjustable.

Set the gauge to the desired spread of rolls. Since in most cases the back rolls are stationary, the back-to-middle roll setting is preferred as a starting point. Place the curved end of the gauge on the end of the back roll (c) close against the neb, and bring the middle roll setting (d) to fit the other curved end of the gauge. The front rollers (e) may be gauged either from the back rolls or from the middle rolls. Always in making the settings keep the gauge tight against the nebs (dotted line).

The nonadjustable gauge is used in the same manner. Actually I find this gauge easier to use when I am gauging the back-to-front roll distances.

When using either gauge, make sure that the rolls are resting against the front part of the nebs (f) to accommodate any wear at those points.



CONTRIBUTOR NO. 8990

One way to prevent press-offs

EDITOR TEXTILE INDUSTRIES:

In my experiences on knitting machines I naturally have learned that press-offs will occur now and then. Also I have learned that a likely time for one to occur is right after the needles have been oiled, or right after new needles have been installed.

Oil will get on the latches of the needles and cause them to (or give them a tendency to) stay closed. Also the latches of the new needles are prone to stay closed.

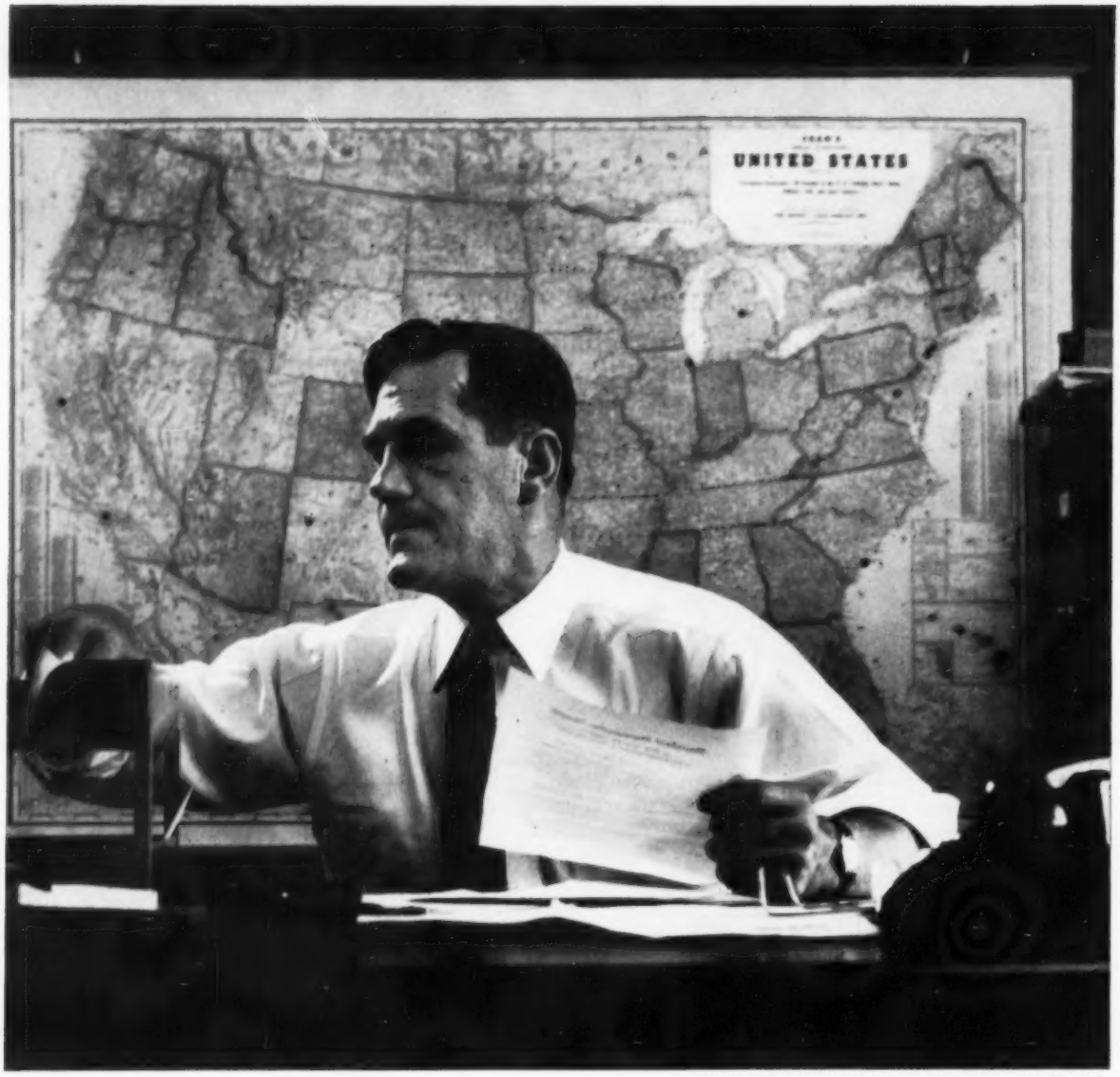
Once a press-off has occurred under those conditions it is well for the operator to force the latches open ahead of him as he repairs the press-off. He can do this by using the butt of a needle to rub the needles just below the latches opposite the place where the press-off is repaired.

As the press-off is put up between the guides, opposite that place and between the next two guides, rub the needles lightly just below the latches hard enough to open them.

This will keep the latches open on the long needles where the needles will take the oncoming yarn and the fabric. The short needles will open automatically if the long needles stay open. Of course if the needles are rubbed too hard the latches will fly open and then fly back closed without the operator knowing it.

If this is neglected the fabric will shed off as fast as it is being put up—sometimes it is not noticed until the press-off has been put up, and the work has to be done again.

This is also true of the Supreme and Brinton knitting machines. Although they do not have the short needles, the same trouble happens to them, and a different procedure is needed to open the latches. To open the latches on these two machines a small brush (tooth brush size) is a good tool. Open the latches between the guides by rub-



COPYRIGHTED MAP COURTESY OF THE GEORGE F. CRAM CO., INC.

This man has 48 states on his mind

(His job is moving Dow Caustic Soda into your backyard)

He's learned to think in terms of the best type of transportation, time in transit and customer convenience in receiving. He's an important link in the long chain of people who produce, sell and deliver Dow Caustic Soda.

Dow caustic in many forms—solid, flake, ground and solution—moves into the backyards of American industry from several strategically located shipping points.

It is shipped direct from three Dow producing plants located at Freeport, Texas; Midland, Michigan; and Pittsburg, California. A new plant at Plaquemine, Louisiana, will be in production in 1958.

It is also distributed through terminals at Bayonne, New Jersey; Carteret, New Jersey; Port Newark, New Jersey; Charleston, South Carolina; Chicago, Illinois; Baltimore, Maryland; and Los Angeles, California. A new terminal at Grants, New Mexico, will help to provide even better service to Dow Caustic Soda customers.

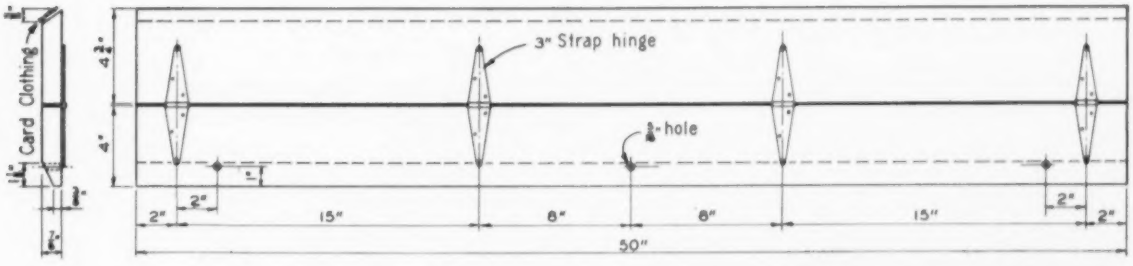
For more information about the advantages of buying caustic from Dow, write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Department AL 604F.

YOU CAN DEPEND ON DOW

bing the backs of the needles with the brush, and then turn the machine until the unopened needles are in view. Work this way until all the latches are open, then start to repair the press-off. Here again the operator must use caution to open the latches too forcibly.

CONTRIBUTOR No. 9017

This warper lease board prevents tangles



EDITOR TEXTILE INDUSTRIES:

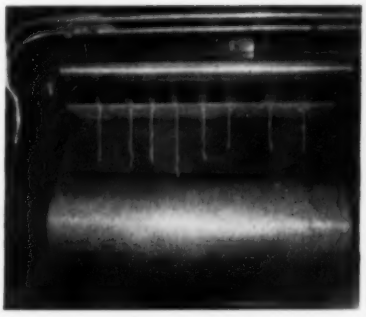
We made the lease board shown here for use on our Barber-Colman warper Model D-W with a 40″ head.

Before the creeler or the warper tender starts to bring the bunches of ends to the warper comb, he opens the lease board, brings the bunches to the warper comb, and sticks every bunch to the lease board.

This prevents tangled bunches and loose ends between the warper and the creel.

After the ends are placed in the comb, the lease board is closed for the running time of the next beam. It is then reopened before turning the creel so that the ends will not stick to the board while cutting the ends from the beams.

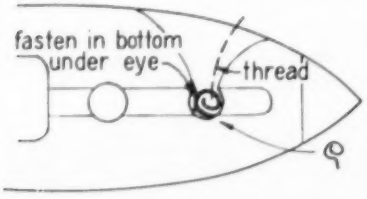
CONTRIBUTOR No. 9007
(Canada)



How to keep heavy yarns in shuttle eye

EDITOR TEXTILE INDUSTRIES:

We were bothered by the exasperating habit of our heavy yarn coming out of the shuttle eye and of course stopping on the center fork. We tried the usual things: anti-ballooning devices in the shuttle, more fur, etc., but nothing stopped the unthreading. The yarn did not come out of the shuttle eye on each quill, but seemed to



be recurring about every tenth quill. This does not appear to be excessive, perhaps, but our quills were running only one minute each, and such stoppage represented a very definite loss to us.

I took the eye out of a shuttle and inserted a small piece of wire which I had bent into a loop (see illustration) so that the loop would line up with the outside of the shuttle. At one end of the loop I bent a straight portion of the wire to be inserted in the shuttle wall and act as a post as well as a part of the loop. I set the loop midway in the space where the thread leaves the shuttle. As the thread is drawn from the shuttle it is trapped under the curved portion of the wire while being held between two posts. The yarn stopped unthreading from the eye.

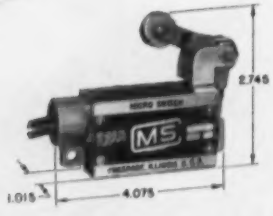
CONTRIBUTOR No. 8918

Look about you for any short-cut in production, time-saving device or practice, or quality improvement suggestion. Enter it in TI's kink contest which closes August 15. Rules on page 137.

MICRO SWITCH . . . FIRST IN PRECISION SWITCHING

How to CUT COSTS in textile production processes by installing MICRO SWITCH Precision Switches

Here are ways mill operators use these versatile switches to give more automatic control

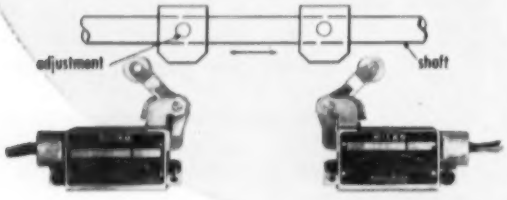


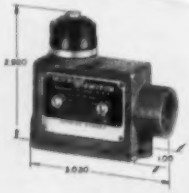
General-purpose limit switch for motion control

Illustrated are two general-purpose limit switches used in a typical motion-control application. Here the stationary limit switches control the motion as they are actuated by dogs on the driven member.

The switches used in this application combine the features of precise operation, rugged construction and excellent sealing in one compact unit. The adjustable roller arm actuator is suitable for fast cam or slide operation. The roller arm is field adjustable through a vertical arc of 260°.

This switch is Underwriters' listed at 15 amps., 125, 250 or 460 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.



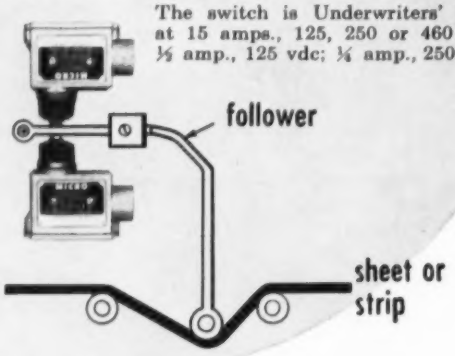


Sealed-plunger switch keeps tension uniform

These precision switches give automatic tension control as material passes to a winding reel. The switches, when actuated by the "follower," speed up or slow down the reel and keep the tension at the proper point.

The switch shown is enclosed and has a sealed-plunger actuator. An elastomer boot on the plunger and a gasket between the bottom plate and the housing seal out lint, dust and other foreign materials.

The switch is Underwriters' listed at 15 amps., 125, 250 or 460 vac; ½ amp., 125 vdc; ¼ amp., 250 vdc.



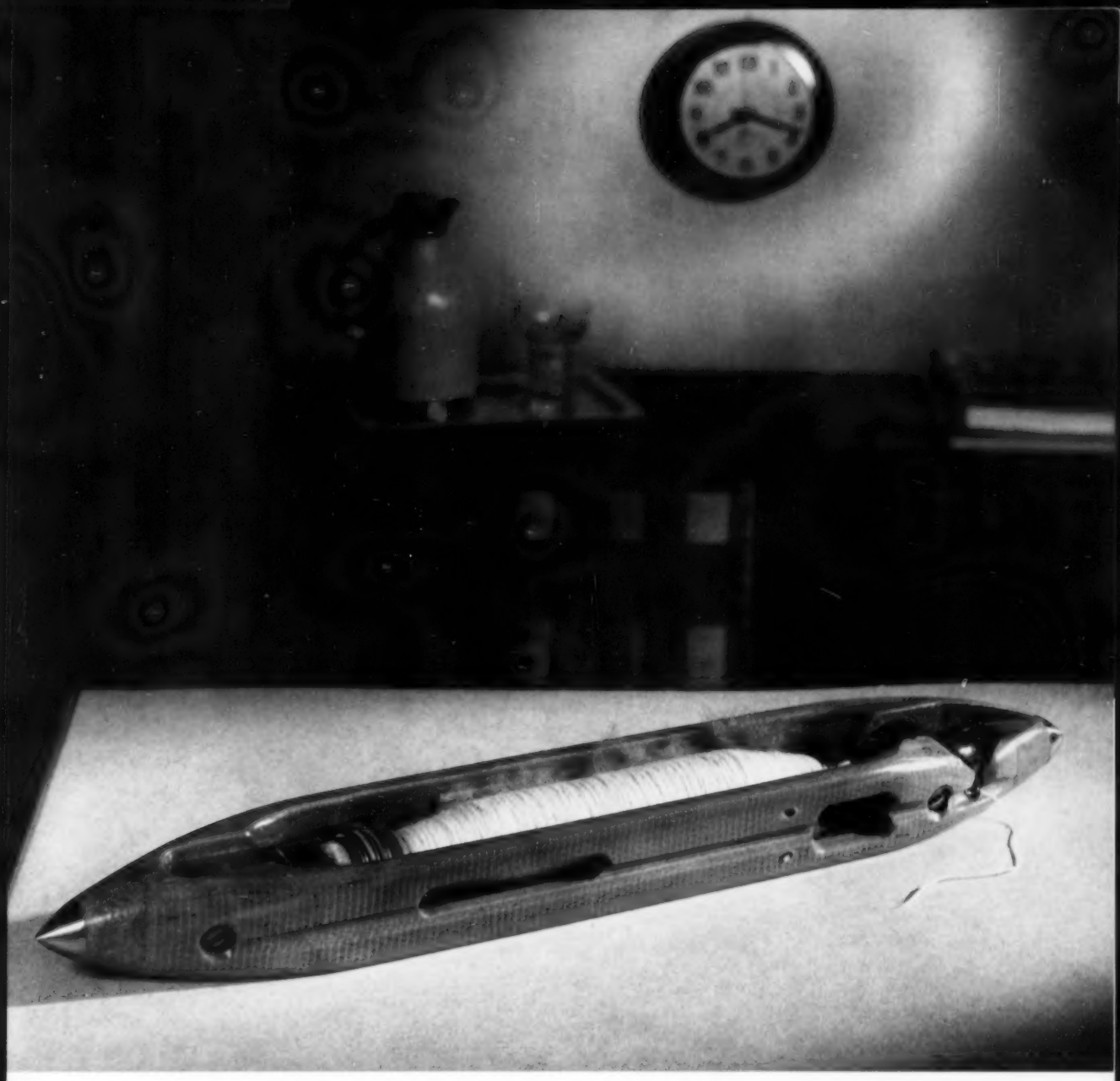
Mill operators have found hundreds of other uses for MICRO SWITCH Precision Switches

- as trumpet stops on combing heads
- as carriage movement controls
- to prevent needle breakage
- to stop bobbin winding when bobbin fills
- as thread breakage detectors
- to control cloth position as web unrolls
- to position clamps on cloth stretching machine
- as thread run-out detector on loom shuttles
- to automatically eject unfilled quills
- to stop motor when gear box is opened
- to control tension on cloth measuring machine
- as selvedge build-up control
- as fabric thickness detectors
- and many other textile applications

Send for catalog 83 on Industrial Enclosed switches

For complete information contact the Authorized Distributor near you. Technical Field Engineering is available at your MICRO SWITCH branch office.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS



Better than 12,000 hours . . .

that is the remarkable performance of one Draper Tru-Mold Shuttle in actual mill use.

Operating under similar mill conditions the average life of a group of Tru-Mold Shuttles is over 6,000 hours.

The use of superior materials and new manufacturing methods make such shuttle life possible.

The Tru-Mold is the only shuttle in which the tips *are molded as an integral part of the product.* This eliminates the chance of shuttle tips becoming loose.

Constructed of special phenolic laminated and macerated stocks, materials which have constant physical properties, *shuttle fittings stay in position* and a greater uniformity of product can be maintained.

For longer shuttle life — greater shuttle economy — equip your weave room with Draper Tru-Mold Shuttles.

DRAPER CORPORATION

Hopedale, Mass. *Atlanta, Ga.* *Greensboro, N. C.* *Spartanburg, S. C.*

No. 4 of a Series of
Improved Draper Repairs
and Mechanisms

BETTER SHUTTLE BOXING WITH THE NEW #14 SHUTTLE CHECK

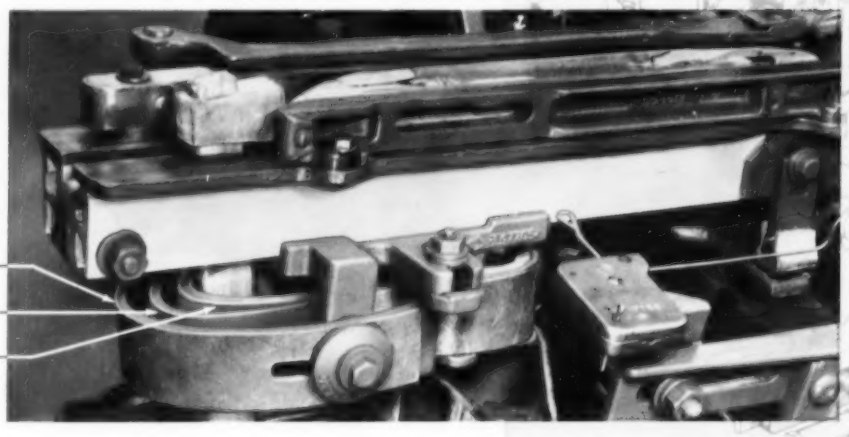
The recently developed #14 Shuttle Check features an Auxiliary Check Strap which acts as a cushioning strap to position the full-boxed shuttle in proper location for picking and bobbin transfer.

Large frictional areas on the adjustable fingers used in this construction reduce wear on straps.

Labor savings result from the fact that check strap settings are not critical. A minimum of friction required on friction fingers contributes to easier picking and smoother loom operation.

The softer checking action of the #14 Shuttle Check insures longer Picker life, and easy adjustment is provided to compensate for Picker wear.

The #14 Shuttle Check is available for X-2 model looms with 15¾" or 16½" shuttles and Extended Aluminum Lay. For application to other X-2 loom conditions, and to other models of Draper looms, consult your Draper representative.



DRAPER
CORPORATION

Hopedale, Mass.

Atlanta, Ga. *Greensboro, N. C.* *Spartanburg, S. C.*

Knitting Section

Stands out clearly
above all others

VIBRALON
THE FORMULA WITH
SALES APPEAL

VIBRALON is a salesman extraordinary. Place VIBRALON-finished hosiery in the midst of any number of hosiery treated with other formulas and you'll unfailingly select the superior quality of VIBRALON-finished hosiery.

No other formula for hosiery finishing offers so many benefits as does VIBRALON. Here's how this amazing formula increases the value of nylons:

- Provides greater snag and pick resistance for longer and harder wear!
- Makes nylons silky soft . . . while giving them that huggable, sleek look!
- Gives nylons a permanent matte-dull beauty!
- Provides nylons with warmth and absorbency . . . gives summer *and* winter comfort!

For complete details on this amazing finish, call or write Fancourt today.

W. F. FANCOURT CO.
519 SOUTH DELAWARE AVE.
PHILADELPHIA 47, PA.

SOLVING FINISHING PROBLEMS SINCE 1904

SOUTHERN OFFICE—846 S. MAIN ST., BURLINGTON, N. C.
CANADIAN OFFICE—CHEMTEX PRODUCTS, LTD.
49 DENSLEY AVE., TORONTO 15, ONT.

WILDMAN JACQUARD

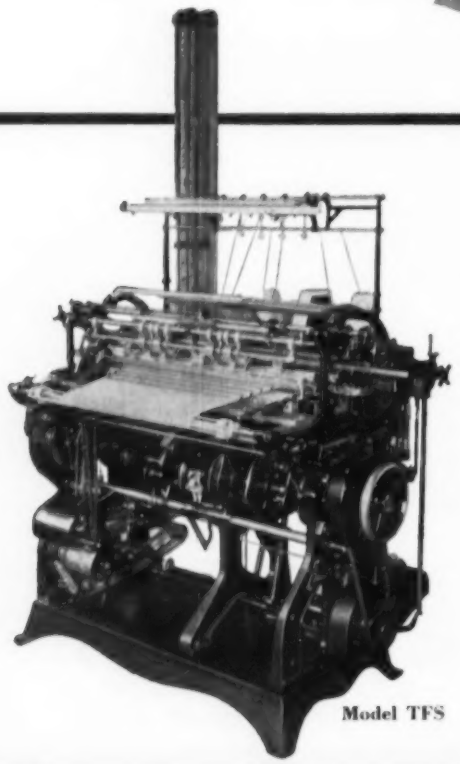
the accent is on quality fabrics

Whether it be full fashion or plain interlock, fabrics made on Wildman Jacquard knitting machines are "distinctively different" in quality and appearance.

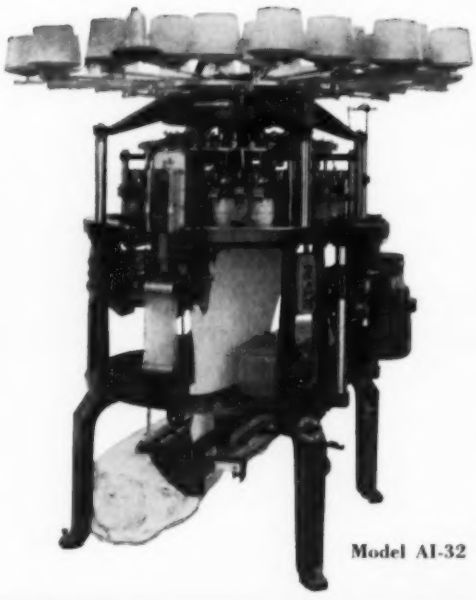
The "TFS" 30" single section full fashion machine permits increased production, multiplicity of sizes to be run simultaneously, less downtime and greater ease of operation.

The model "AI" 32" diameter 32 feed "single purpose" circular interlock machine (rib type) produces a larger, more serviceable piece of true interlock fabric.

For knitting versatility, production, and quality — specify Wildman Jacquard Knitting Machinery.



Model TFS



Model AI-32

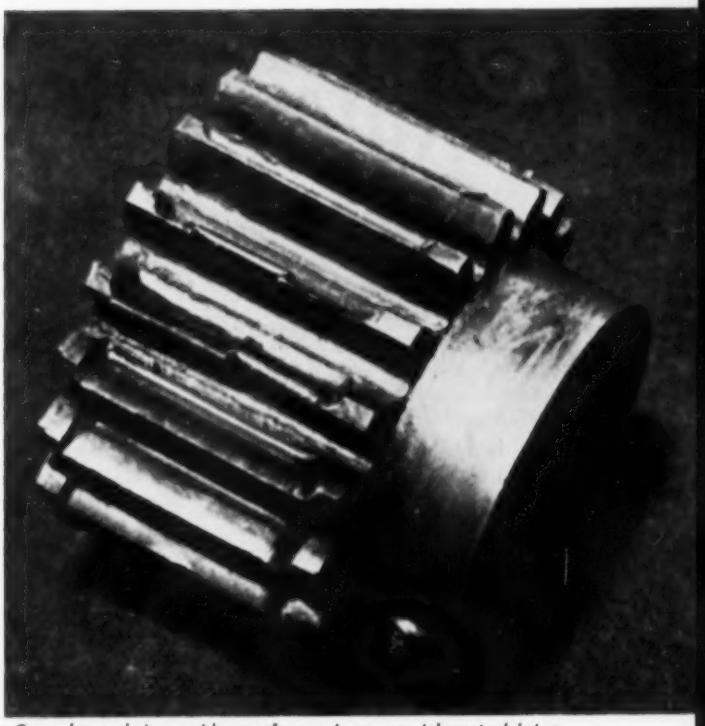
For complete information, write:

WILDMAN JACQUARD CO. . . . *leading manufacturers of fine knitting machinery*

1210 Stanbridge Street, Norristown, Pennsylvania • *A subsidiary of* Draper Corporation Hopedale, Mass.

Planned F-F Lubrication Pays

Proper care and lubrication are cheaper than reconditioning



Gear shows obvious evidence of excessive wear. Adequate lubrication could have prolonged the life of this part.

by R. D. Brackett
Exclusive

MOST manufacturers of full-fashioned knitting machines recommend that the high-speed, fine-gauge machines of today be reconditioned every three years to insure good production and quality. Many manufacturers of full-fashioned hosiery find this procedure impractical, and almost impossible from the economical standpoint. Mill owners maintain that the full-fashioned hosiery market does not warrant such expenditures.

Reconditioning knitting machines is an expensive undertaking. Under current adverse conditions, what can be done to prolong the life of knitting machines? The answer is: *lubricate them.* Many machines are operating from 76 to 100 courses per minute; twenty-four hours a day; five, and sometimes six days a week.

Today there are more than 180,000 working parts on the larger types of full-fashioned machines. During one set all of these parts are in motion and contributing to wear. The sinker heads, needles, cams, rollers, and other working parts too numerous to mention, are subjected to wear every time they move.

How can you get the most out of your machine at the most reasonable cost and expense? The answer is: *lubricate!*

Ball bearings were completely demolished, leaving roller and roller stud to destruction. Again, adequate lubrication could have forestalled this expense.

Lubrication and proper care can prolong the life of any machine. It is of vital importance that each unit should be properly lubricated to insure good production, good work, and a minimum of wear, not to mention time and effort needlessly wasted on an improperly lubricated machine.

This does not imply that you can

(Continued on page 211)

Automatic sweater setting

enables this mill to heat-treat up to 40 dozen textured nylon garments per hour

Staff prepared
Exclusive

IN September 1956, management of Sterling Dyeing and Finishing Co., Philadelphia, Pa., made a decision to diversify its operations by including the processing, dyeing, and finishing of sweaters made of Banlon, Tycora, and any textured nylon yarn.

Essential to the processing of Banlon is the setting operation which precedes dyeing and finishing. This heat-treating operation, to accomplish desired end results, must be carried out at a carefully-controlled temperature for a specific period of time.

Among the characteristics which the treatment imparts to the textured yarn, in this case in sweater form, are those of proper wearability, snag resistance, and shape retention of the finished sweater.

The heat-setting operation also increases the affinity of the textured nylon yarn for dyeing. If the

The sweaters are piled neatly, without wrinkles, on a sliding tray which is moved into place. To move the loaded tray into the unit, the operator merely presses a button. Upon completion of the setting the tray slides out of the unit automatically.

proper time-temperature cycle and conditions are not adhered to, adverse shade changes can occur. A temperature in excess of 260 F, for example, will reduce the brightness and clarity of tints and pastels.

From a production standpoint (bearing the consumer in mind) it was vitally essential, too, that sweater sizes remain uniform from lot to lot. This meant that uniformity in the setting operation would have to be maintained from day to day.

With these basic requirements of the setting operation in mind, management of Sterling Dyeing and Finishing Co. had a setting machine built to its specifications and projected needs. The equipment (shown in photograph) has been in use since September 1956.

Prior to the heat-setting operation, some precautions in piling the sweaters on the trays must be observed. Operators are instructed to stack the sweaters carefully without wrinkles, for these would be permanently set and noticeable in the finished sweater.

The actual operation of the machine is simple. After the sweaters have been carefully laid out on the trays, the operator merely presses a button and from there on until its completion the operation becomes a fully automatic one. The setting cycle is 15 minutes, carried out at a temperature of 260 F. This 15-minute cycle is broken into five individual ones.

The first is a vacuum operation which quickly removes cool air from the unit. Following this, a small measured amount of steam is let in. Then a longer vacuum period ensues, followed again by a steaming cycle (this is a longer one), and lastly, a vacuum cycle to condition the sweaters gradually to equilibrium. Upon completion the door opens automatically and the tray stand slides out.

At present the unit is operated two eight-hour shifts daily, five days per week. The current production is placed at 25 dozen sweaters per hour. However, the volume could be boosted to 40 dozens per hour if the backlog were sufficiently heavy.

While the machine is currently used only for Banlon and Tycora yarn in sweater form, it can be utilized for the setting of other textured nylon in sweater, yarn, or fiber form.

The machine was built to Sterling Dyeing and Finishing Co.'s specifications and needs by the Turbo Machine Co., Lansdale, Pa., and is known as the Turbo Sweater Setter.

Tip on yarn tension for body knitting

EDITOR TEXTILE INDUSTRIES:

The washer-type tensions on the Supreme and Brinton knitting machines are made with square-edge washers to fit on the bottom of the post where the eyelet is threaded. With the yarn running over the square-edged washer the knots hit the square edge and often cause the yarn to break.

To eliminate this trouble, remove the square washer and put it aside. Turn the tension washer over (let the round-shaped side be up) and install it on the post and thread the eye on top of the washer. Then mount the needed tensions on top of the yarn. This saves lots of unnecessary stops.

CONTRIBUTOR No. 9026

Troubled with dropped stitches?

EDITOR TEXTILE INDUSTRIES:

In making light-weight fabrics on the knitting machines where needles are removed to give the desired effect (such as removing one needle and leaving the next two in place all around the dial) the empty slots have a tendency to make drop stitches and to cause excessive loops on the needles.

We have found that it helps prevent such defects to insert dummy needles in the blank slots. For this we use old needles from which we break the hooks and the latches. The broken ends are smoothed on a steel brush at the emery stand. With these dummy needles in place the yarn has something to rest on and thus is more easily kept under control.

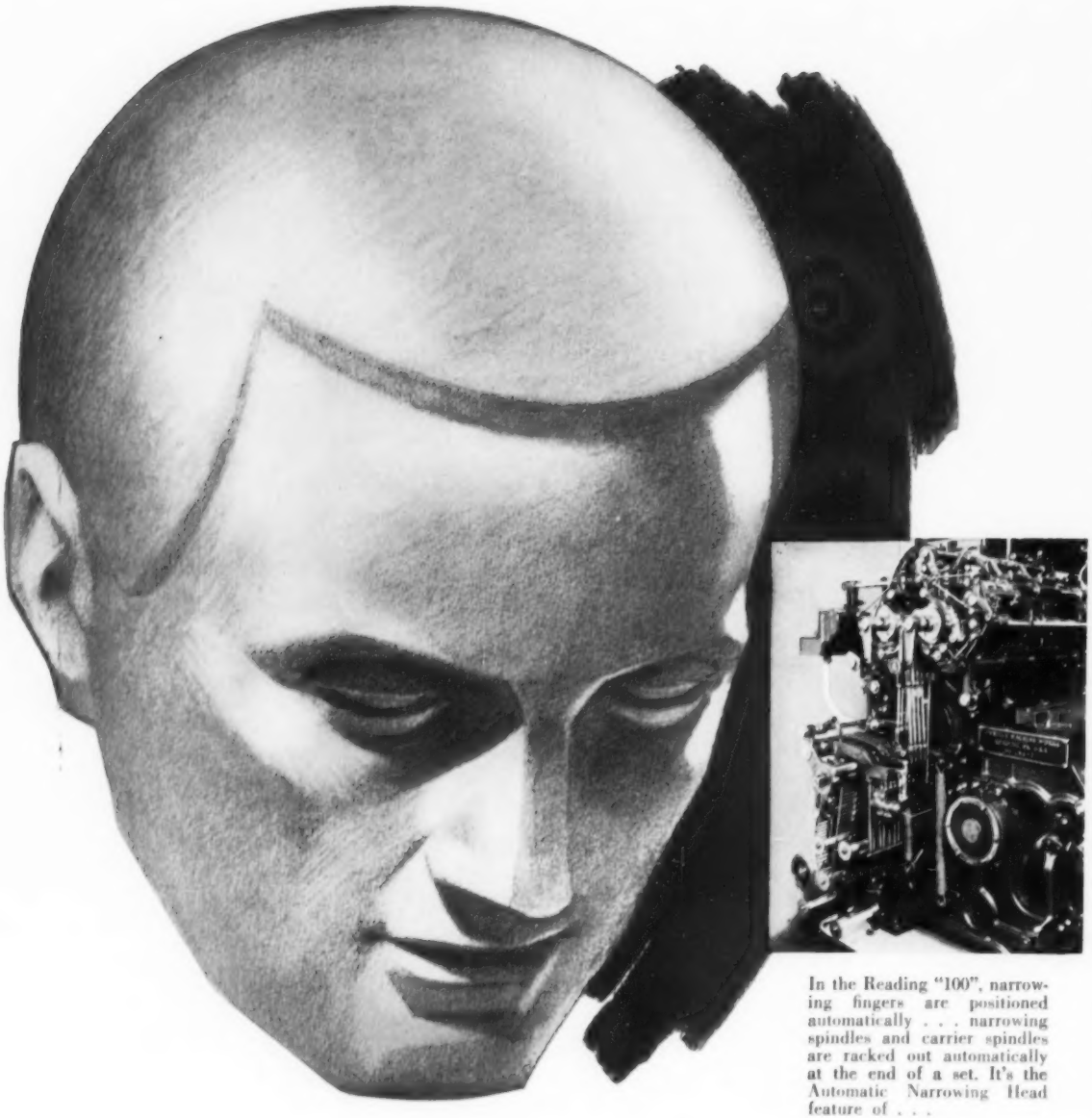
CONTRIBUTOR No. 9025

Current statistics on U. S. full-fashioned outerwear

	1955	1956
Number of machines	360	473
Gauge of machines (% of total machines)		
9, 10½, 12 gauge	1.5	2.0
15 gauge	3.5	2.5
18 gauge	3.5	5.0
21 gauge	82.5	77.5
24 gauge	7.0	11.0
20½, 22½, 27, 30, 36	2.0	2.0
Number of sections	3,842	5,147
Size of machines (% of total)		
4 sections per machine	12.5	14.5
6-8 sections	3.5	3.0
9 sections	4.5	3.5
10 sections	25.5	26.5
12 sections	32.5	29.5
13 sections	12.0	13.5
14-16 sections	2.0	2.5
20 sections	6.5	6.5
24-26 sections	1.0	0.5

	1955	1956
Location of machines (% of total)		
Pennsylvania	33.3	30.2
New Jersey	19.2	21.1
New York	18.0	18.0
Massachusetts	10.0	7.8
North Carolina		6.1
Ohio	6.4	4.5
Other	13.1	12.3
Total number of mills	79	99
Location of mills (% of total)		
Pennsylvania	26.6	26.3
New Jersey	26.6	26.3
New York	20.3	20.2
North Carolina		6.1
Massachusetts	7.6	5.0
Ohio	6.3	4.0
Others	12.6	12.1

Source: 1956 "Statistical Survey" published by Textile Machine Works.



In the Reading "100", narrowing fingers are positioned automatically . . . narrowing spindles and carrier spindles are racked out automatically at the end of a set. It's the Automatic Narrowing Head feature of . . .

the machine that almost thinks for itself

The mill-proved Reading "100" is just about the nearest thing to a completely automatic machine as is possible in full-fashioned knitting. Every motion is automatic — and closely controlled — to assure continuous, uninterrupted production of superior-quality stockings at lower per dozen costs, and to make it possible for an operator to earn more money. Let us give you the mill-proved Reading "100" story.

Builders of:
The "Reading" CK-A
Circular Knitting Machine
The "Reading" Tricot Machine
The "Reading 100"
Full-Fashioned Knitting Machine
The "Reading" Full-Fashioned
Outerwear Machine
The "Reading" Braiding Machine
Textile Spring-Beard Needles
Arrow Latch Needles

The "READING 100"
Full-Fashioned Knitting Machine

Knitting Machine Division
TEXTILE MACHINE WORKS, READING, PENNA.
Reconditioning Plant at Asheboro, N. C.
Builders of Textile Machinery Since 1900

One of Our Most Important Services It Costs You Nothing!

Next to quality yarns and quality colors, color and yarn consultation can be one of the most important services we offer — even though it costs you nothing.

We can save you the embarrassment of selecting a shade which is unobtainable with the type of dyestuff you need, from the costly error of using dyestuffs that will bleach out, run, crock or fade rapidly, or from using yarns that may be good for some purposes, but not for yours.

On the other hand, we can recommend dyestuffs and yarns that are ideal for your purposes and that will make your fabrics more salable.

Much of this type of help is unobtainable from books (even if you had time to read them). It is information gained during nearly half a century of experience by the "largest package dyers in the world".

Franklin Process Color and Yarn Consultation is "conveniently yours" from any one of our dyeing plants, or from our New York office. Just ask and we'll oblige.

Franklin Process

Yarn Merchants and Largest Package Dyers in the World — Dyeing Exclusively on the Franklin Spring

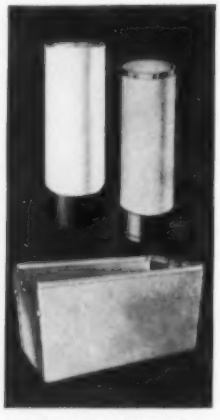
Providence • Philadelphia • Greenville • Chattanooga
Fingerville, S. C.
New York Office — 280 Madison Avenue

X-ray view of Franklin Package — the "secret" of uniform shades. Don't say "package dyed". Say "Franklin Process Dyed".

THE NATIONAL SCENE

MAKESHIFT CONTAINERS RESULTED IN COSTLY DAMAGE at Barringer Knitting Mills, Philadelphia. Orlon sweaters went from mill to dye plant in paperboard cartons, which lasted only a few trips and often broke in transit. Result: pulled threads, smears of dirt, and the extra expense of dry cleaning or classifying items as "irregulars." Carton replacement was costly.

DELICATE FABRICS NOW TRAVEL SAFELY in Kennett "Knitwear Shippers." Barringer eliminated damage to knitted goods in transit when it switched from flimsy containers to strong, smooth, resilient Kennett boxes of National Vulcanized Fibre. These not only protect knitted goods from snags and soilage, but are also light in weight, easy to move and stack, last for years.



JOB-DESIGNED CONTAINERS FOR EVERY NEED can end your materials handling problems. Kennett Receptacles include Roving Cans, Doffing Trucks, Mill Boxes and Trays.

NATIONAL CAN HELP YOU CUT COSTS TWO WAYS. If your problem is *safety in materials handling*, Kennett Receptacles by National can end it. For National Vulcanized Fibre is bone hard, glossy smooth, resilient and long wearing—won't crack, dent or break—won't rust or corrode. If your problem is *speed and efficiency* in handling, National can solve that too. A National Materials Handling Specialist is always available to help you adapt the broad Kennett Line of containers to your exact need. Simply write for our folder—MATERIALS HANDLING FOR TEXTILE PLANTS, or ask to have him call.

NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

In Canada:
NATIONAL FIBRE COMPANY OF CANADA, LTD., Toronto 3, Ontario

Safer, smoother, easier, and practically maintenance-free operation is given by a

Multi-spline clutch for Komets

by K. O. Metz
Exclusive

A MULTI - SPLINE clutch is now available for Komet knitting machines, which offers easier, safer, and smoother clutch shifting. The clutch distributes the load of clutch shifting over a splined surface and eliminates practically all of the constant repairs and parts replacement formerly associated with clutches equipped with only a single key in the clutch, and a Woodruff or straight key in the shaft.

Installation calls for complete removal of the back shaft to permit the removal of the clutch assembly including the right or left pinions. Follow these steps.

Remove trip bar cam from the back shaft and rotate the machine to line up the taper pins of the back shaft and remove the back shaft from the frame.

Remove the pulley assembly from the slow speed pinion and remove the pinion from the frame. Remove the spacer and cam bushing, pinion, and clutch (Figure 2). Remove the Woodruff or spline keys and stop pin from the shaft (Figure 1). Slide out the reciprocating pinion and pinion bushing.

To assemble the multi-spline clutch and sleeve, insert the reciprocating bushing into the reciprocating pinion (Figure 3). Slide out the shaft and time it with segment gear, spot and insert either set of the clutch keys furnished (Woodruff type for machines built up to 10-16-44 and straight key for machines built up to 1955). Refer to Figure 1.

Slide on the spline sleeve and multi-spline clutch (Figure 1) with the timing spot on sliding clutch toward the reciprocating pinion directly in line with the keyway of bevel gear (Figure 2) and insert spacer and driven pinion and clutch on shaft (Figure 3). Position cam bushing and spacer (Figure 2).

Insert slow speed pinion and back shaft through bearing in frame and insert slow speed drive pinion and back shaft pinion. Set the timing mark to correspond with the timing mark on driven pinion (Figure 3). Insert the driven reciprocating gear pinion and timing mark to correspond with the timing mark on segment drive gear; then insert the bearing clamp sleeve.

Pin back shaft members and insert high speed driven pinion on back shaft on outside of frame. Insert pulley assembly and handle (Figure 3) and replace trip bar cam (Figure 2).

Courtesy Scott & Williams, Inc.

FIG. 1

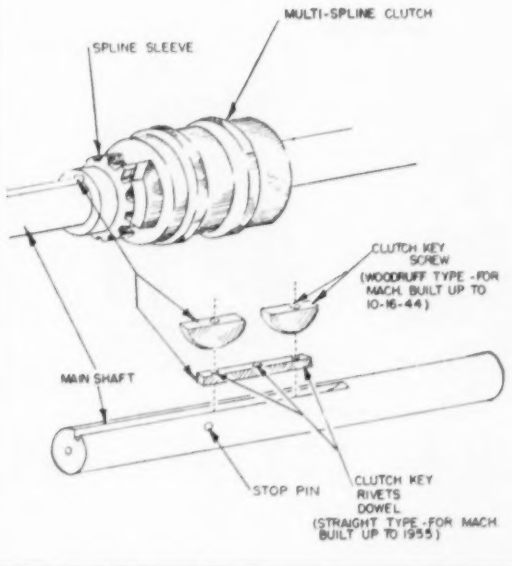


FIG. 2

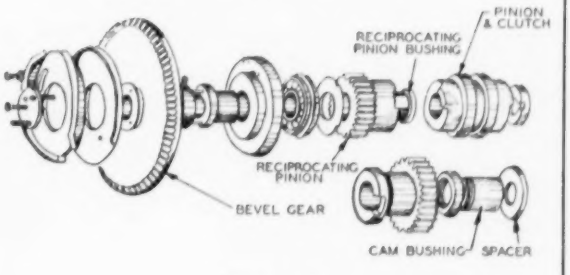
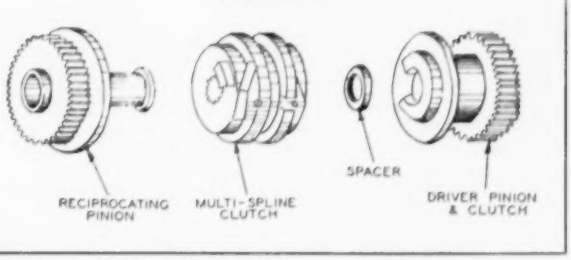
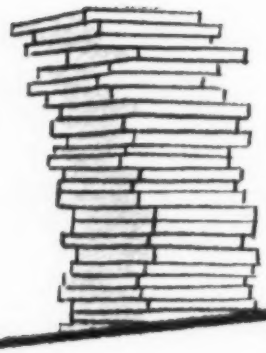


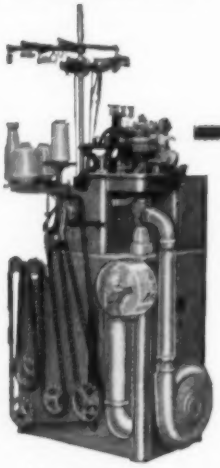
FIG. 3





Hosiery Buyers that KNOW — Go SEAMLESS

Seamless Mills that GROW — Go FIDELITY*



* The only electronically controlled circular knitting machine that offers
- Single or double feed operation
- 400 or 474 needles
- Automatic Tension Device
- Individual Motor Drive
- PLAIN—MESH—or S-T-R-E-T-C-H at the push of a button.

Keep growing in this booming seamless market . . . investigate the advantages of the amazing Fidelity "400" and "474".

Designers and Builders of Intricate, Automatic Precision Machines

SINCE 1911

FIDELITY MACHINE COMPANY, INC.

3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

EXPORT DEPT.: 11 BROADWAY, NEW YORK 4, N.Y.

SOUTHERN REPRESENTATIVE: C. S. BRANNOCK, P.O. BOX 763, MT. AIRY, NORTH CAROLINA

South has 43 per cent of tricot machines, survey shows

■ There were 3195 machines operating in 119 United States tricot knitting mills in 1956, according to information recently made available by Textile Machine Works. Approximately 43 per cent of them were said to have been located in the South, 24 per cent in Pennsylvania, 23 per cent in New York, 8 per cent in New Jersey and New England, and 2 per cent in the Middle West and California.

2849 of the machines were reported to be of the tricot type, 325 Simplex, and 21 Milanese. The majority (2642) of the tricot machines were of 28 gauge construction, 24 were 26 gauge and coarser, and 183 were 32 gauge and finer.

In the ten-year period from 1946 to 1956, the number of machines increased each year from 1729 in 1946 to a high of 3263 in 1955; the first decrease to be noted was last year—68 machines. While the number of tricot type machines has steadily increased to the present 89 per cent, the number of Simplex machines has varied slightly from about 8 to 11 per cent during the period, and in 1956 about 10 per cent of them were of this type. The number of Milanese type machines steadily decreased from a high of about 12 per cent ten years ago to about 1 per cent last year.

Of the 119 mills, 64 were said to be operating fewer than 20 machines; 39 were using 20 to 50 machines; and 16 more than 50.

Average age of the machines, 478 of which were under 100" wide, was determined to be 10.9 years. 1368 were operating at speeds under 400 courses per minute; 1750 between 400 and 600 cpm; and 77 over 600 cpm. 93 per cent of the machines were said to be of 2-bar construction and the remainder 3-bar. 78 per cent were equipped with cast needles and the remainder with butted needles.

Here's how one mill increased guide bar pin life and reduced waste

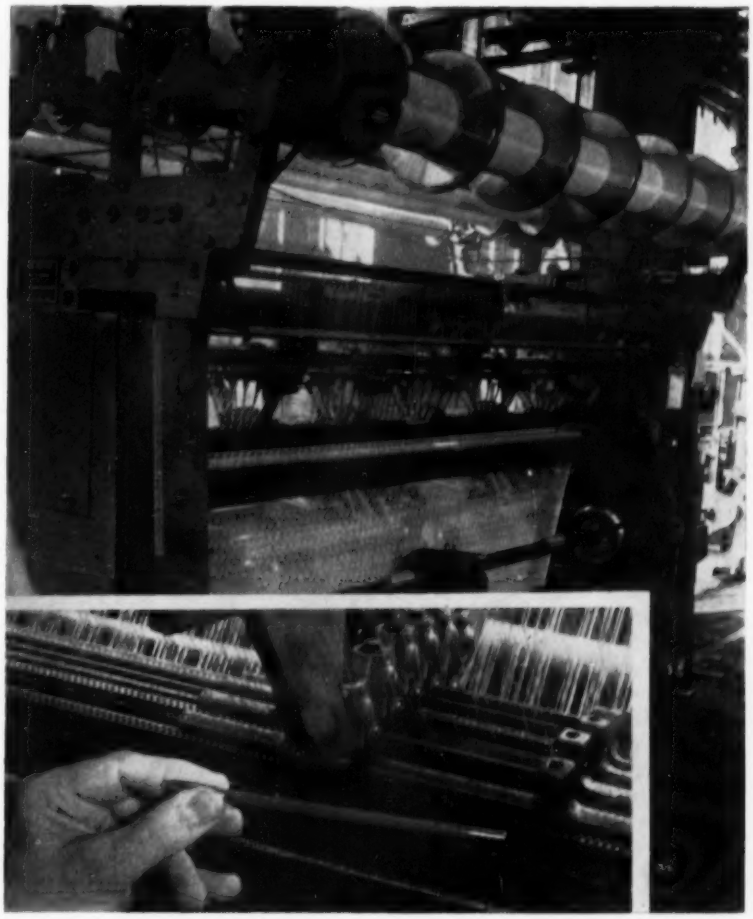
■ The adoption of nylon-coated guide bar pins on a Raschel knitting machine is reported to have increased pin life by 500% and markedly reduced waste costs at The Narrow Fabric Co., Reading, Pa.

According to the announcement, nylon was applied to the surface of the pins by the "Whirlclad" process, a new coating method available from Polymer Processes, Inc., a subsidiary of The Polymer Corp., Reading, Pa.

Previously, the solid steel pins were oiled daily to prevent wear, and normal part life with full lubrication was three months, the mill management stated. Stains from oil drip were said to cost the company as much as $50 per month per machine in fabric waste.

The wear-resistant, low-friction, nylon-coated pins have been running for 15 months without noticeable wear, according to the announcement, and fabric waste from oil drip has been completely eliminated.

A light film of oil is applied to the nylon-coated pins once per week. This lubrication cycle is not critical as the nylon surface retains the oil film for prolonged periods. On the other hand, any omission in oiling the steel sur-



faced pin was said to have resulted in immediate excessive wear. Thus, the nylon coatings have virtually eliminated expensive machine jams caused by worn pins.

The "Whirlclad" process for coating nylon on metals involves dipping the preheated object to be coated into a fluidized bed of finely divided dry coating powders. The powders are fluidized by ascending currents of gas or air in specialized equipment. The parts to be coated are preheated above the melting point of the coating powders and the powders essentially heat fuse onto the surface of the part. The process was invented in Germany, and Polymer Processes, Inc., has obtained exclusive United States patent and licensing rights.

The diameter of the center portion of the steel guide bar pins was reduced .020" by undercut prior to coating. A coating slightly over .010" thick was then applied, after which the pins were centerless ground to the original ¼" diameter. Thus, the part was produced with the strength, rigidity, and dimensional tolerances of the metal, coupled with the nylon surface characteristics. The "Whirlsint" coating powders used were specially processed to provide proper adhesion and the desired mechanical properties to the guide bar pins.

Mill-conceived machine packages hosiery for supermarket shoppers

■ A definite trend in merchandising of women's hosiery has been taking place. The housewife and business girl can now purchase their favorite brand of stockings in attractive package form at the neighborhood store.

To keep abreast of this trend, management of Sterling Dyeing and Finishing Co., Philadelphia, Pa., recently installed a high-speed wrapping machine which is capable of wrapping one or more pairs of stockings in a printed transparent film with label attached, or a box containing one or more pairs. In each case, the finished package is completely heat sealed.

This machine was designed especially for hosiery box wrapping and is the result of intensive cooperation between Sterling and a packaging equipment maker.

1956 hosiery shipments off 4.5 per cent

■ Hosiery knitting mills in the United States shipped 147,388,000 dozens of pairs last year, according to information contained in the 23rd annual statistical report published recently by the National Association of Hosiery Manufacturers. This represented a decline in volume amounting to 4.5 per cent as compared to 1955, President W. F. Williamson noted in the foreword. Production was kept in close relation with shipments during the year, he said, the output being 145,682,000 dozens.

Explaining that the loss in volume of shipments was not shared equally among the various categories, Mr. Williamson reported that women's hosiery, including anklets, showed a decline of only 2.5 per cent, while the men's division was off a little over 8 per cent. Children's and infants' shipments fared best in the absolute figures, he said, with a loss of 1.4 per cent. Women's hosiery composed 48.3 per cent of the total industry shipments, men's hosiery 35.9 per cent, and children's and infants' hosiery 15.8 per cent.

Mr. Williamson pointed out that the number of full-fashioned mills operating in the field again declined, thus bringing productive capacity in closer balance with demand. Some machinery involved in these liquidations remained in use under new ownership, he said; however, a considerable portion was either exported or junked.

Following are some other data

contained in the report:

Women's Full-Length Hosiery Production. Over 60 million dozen pairs were produced last year, a .4 per cent increase over 1955.

Full-fashioned hosiery production continued the decline which started in 1953; 43.6 million dozen pairs were made last year. On the other hand, seamless hosiery production continued to increase, the total for 1956 being 15.6 million dozen pairs.

In 1947, full-fashioned nylon production was 21.3 per cent in 15 denier and 50.4 per cent in 30 denier; in 1956, comparable percentages were 76.4 and 12.9. In 1947, seamless nylon production was 28.6 per cent in 15 denier and 22.2 per cent in 30 denier; in 1956, comparable percentages were 97.6 and 1.8.

In 1947, full-fashioned production was 63.3 per cent in 48 gauge and under, and 51 gauge represented 34.0 per cent of the total. In 1956, production was 1.7 per cent in 48 gauge and under, 43.5 per cent in 51 gauge, and 46.2 per cent in 60 gauge.

In 1947, production in 370-380 needle construction was 13.4 per cent and in 400 needle and over 74.3 per cent. The equivalent percentages in 1956 were: 3.8 per cent for 370-380 needle and 93.1 per cent for 400 needle and over.

Men's Hosiery Production. Men's seamless half-hose production decreased from 24.6 million dozen pairs in 1947 to 8.05 million in 1956; whereas, men's slack socks manufacture increased from the 1947 figure of 21.9 million dozen pairs to 29.04 million in 1956.

Cotton is the predominant fiber in this classification. In 1956 it constituted 55.1 per cent of the total as compared with 57.2 per cent in 1955. Nylon hose in 1956 were 27.9 per cent of the total as against 25.7 per cent in 1955. Wool hose varied slightly, being 6.9 per cent of the 1956 production and 6.5 per cent of that of 1955.

Where Hosiery Is Made. In 1956, northern production, including the far West, was 18.5 per cent of the total, while southern production was 81.5. Of full-fashioned hosiery, 25.6 per cent was made in the North and 74.4 per cent in the South. Of seamless hose, 15.4 per cent was made in the North and 84.6 per cent in the South.

Employment and Plants. In 1956 there were 1,116 hosiery plants with an average of 97 employees. Classified as full-fashioned mills were 544 of them, the remainder being seamless. Average number of employees in full-fashioned mills was 82; in seamless, 111.

Don't turn down promotion for fear of heart attack

■ The belief that promotion can kill you, otherwise known as the boss dies young, is now being challenged.

Industrial physicians interviewed in connection with a survey on executive health recently conducted by the American Management Association found no evidence that executives are in any worse state of health than other employees. In fact one chemical company medical director reported that top executives from his company seem less likely than other employees to suffer from heart disease and high blood pressure.

This finding has been corroborated by figures compiled by the National Office of Vital Statistics which indicate that men of the managerial, technical, and administrative level as a group have lower than average mortality rates. It has also been affirmed by the fact that life insurance companies sell policies to men in executive or higher-level occupations in general at the lowest premium rates.

These affirmations that business executives do on the whole enjoy average health are reassuring, said AMA, but—as doctors are quick to point out—"average" health is not good enough. In recognition of the fact that one of a company's greatest assets is the good health of its managers, many concerns have instigated periodic health examinations for its executives as well as its rank and file employees.

In order to examine the current status of health examination policies in industry, the Association recently surveyed a nation-wide cross section of 847 medium-sized and large companies of all types.

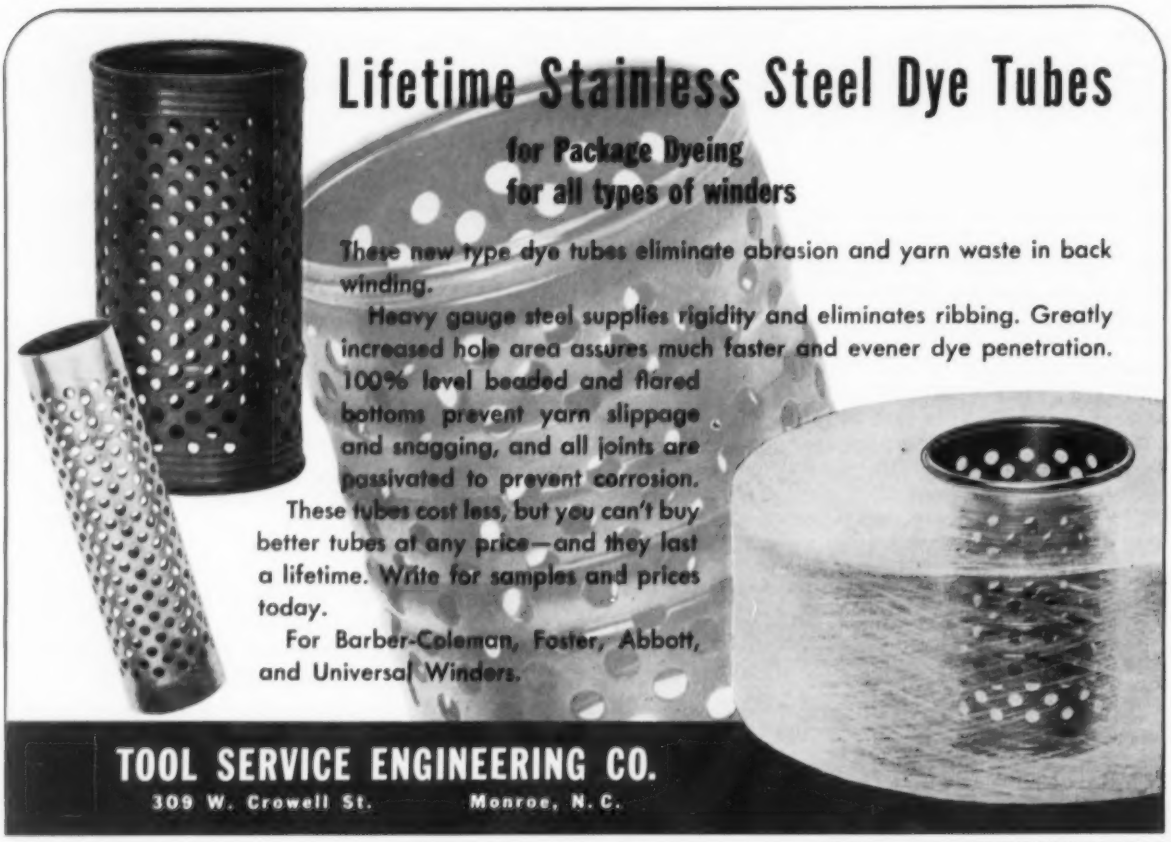
Of the 447 companies replying, 70 per cent of the respondents require an executive to undergo a physical examination as a condition of hiring, although only 53 per cent offer examinations to executives already employed.

Company size seems to have little influence on the requirement for a hiring examination, but it is a definite factor in on-the-job examination policy, notes author Lydia Strong in her report of the survey results* in the May issue of *The Management Review.* Three-fourths of the large firms (more than 5,000 employees) offer some kind of executive health examination plan. But only half of the smaller ones offer one. Every respondent with over 10,000 employees has a plan.

The majority of the programs are on a periodic basis, usually annual, but sometimes there are special provisions for older and younger men. In a few companies, the examinations are given on some non-periodic basis such as before promotion, upon request, or where there is felt to be a health problem. The full cost of the health examination is paid in full by practically every company surveyed.

Only three out of ten companies with health examination plans make the same examinations available to all employees. But three out of four companies *not* offering health examinations to executives don't have them for any other group of employees either. Forty-three of the firms surveyed in effect discriminate against executives. They have health examinations for production workers,

(Continued on page 213)



Lifetime Stainless Steel Dye Tubes

for Package Dyeing
for all types of winders

These new type dye tubes eliminate abrasion and yarn waste in back winding.

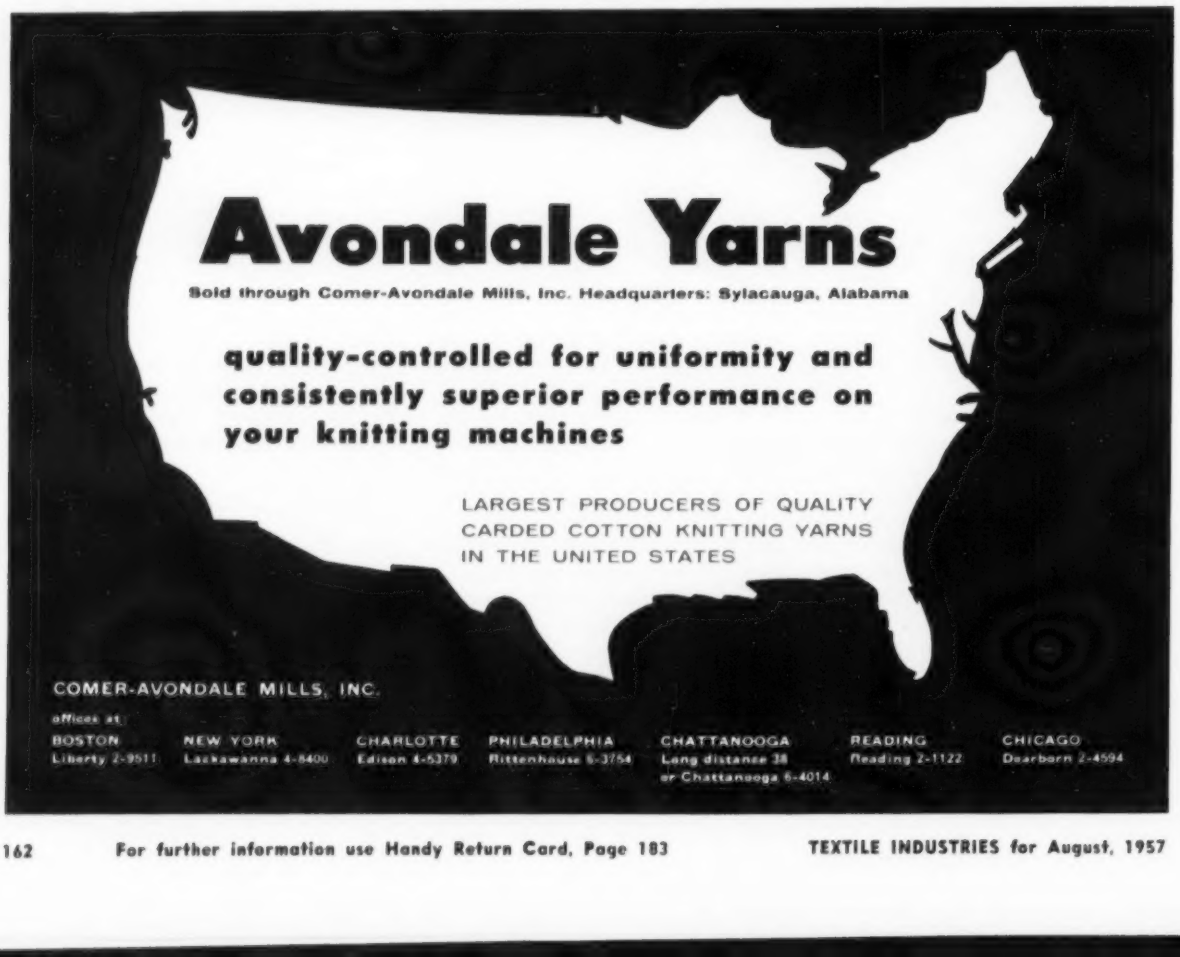
Heavy gauge steel supplies rigidity and eliminates ribbing. Greatly increased hole area assures much faster and evener dye penetration.

100% level beaded and flared bottoms prevent yarn slippage and snagging, and all joints are passivated to prevent corrosion.

These tubes cost less, but you can't buy better tubes at any price—and they last a lifetime. Write for samples and prices today.

For Barber-Coleman, Foster, Abbott, and Universal Winders.

TOOL SERVICE ENGINEERING CO.
309 W. Crowell St. Monroe, N. C.



Avondale Yarns

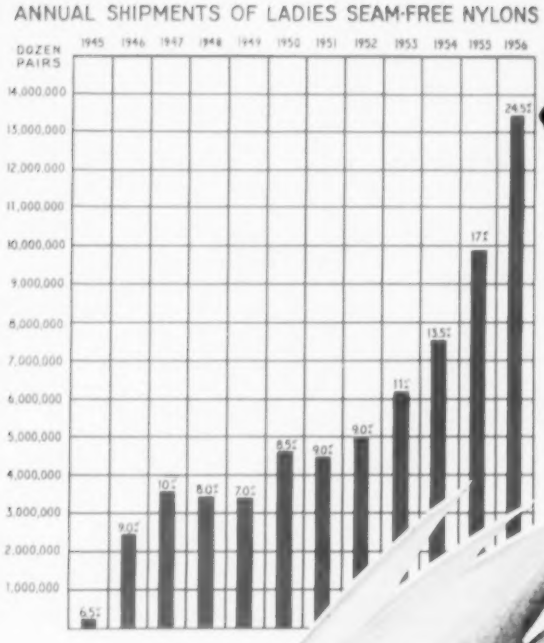
Sold through Comer-Avondale Mills, Inc. Headquarters: Sylacauga, Alabama

quality-controlled for uniformity and consistently superior performance on your knitting machines

LARGEST PRODUCERS OF QUALITY CARDED COTTON KNITTING YARNS IN THE UNITED STATES

COMER-AVONDALE MILLS, INC.
offices at:

BOSTON	NEW YORK	CHARLOTTE	PHILADELPHIA	CHATTANOOGA	READING	CHICAGO
Liberty 2-9511	Lackawanna 4-8400	Edison 6-5379	Rittenhouse 6-3754	Long distance 38 or Chattanooga 6-4014	Reading 2-1122	Dearborn 2-4594



Seam-Free NYLONS

in ever increasing consumer ~~acceptance~~ *demand*

Stepping in High Fashion

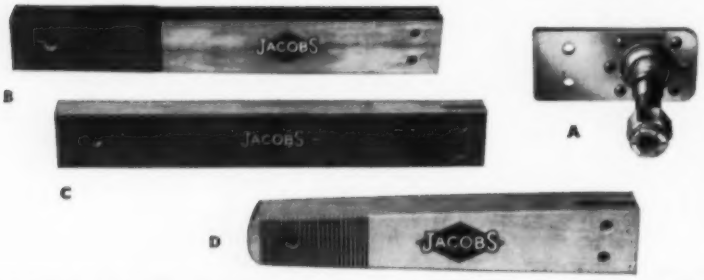
Seam-Free hose of superlative fineness and clarity of fabric, either plain or patterned, to satisfy the most fastidious wearers, are produced on the famous Scott & Williams KN circular knitting machine (with patented automatic tensioning)

SCOTT & WILLIAMS, INC.
Est. 1865
STANDARD IN THE KNITTING INDUSTRY
LACONIA N.H. U.S.A.

Main Offices and Plants: LACONIA, N. H.
Sales Office: Empire State Building, N. Y. 1, N. Y.

Sweepsticks and Connectors

by JACOBS *For Maximum Loom Efficiency*



A. VAN-DAR HEAD

A replaceable rod end bearing for all types of JACOBS sweepsticks. Allows close fit on pick arm stud and avoids hole elongation to give a pick that is absolutely even. Heads and bodies are individually replaceable.

B. RUBBERWELD

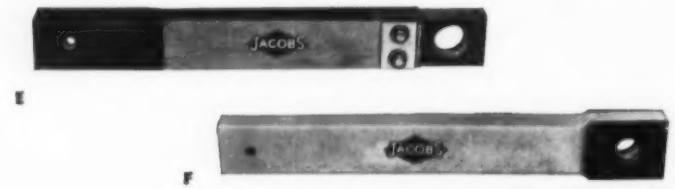
Patented construction of chemically bonded plyweld and neoprene gives the smoothest, most resilient pick known to the industry.

C. RUBBERIZED FABRIC

Molded rubber combined with fabric. Uniform consistency assures maximum strength and length of life.

D. HICKORY

Made of highest grade stock. Economical and long-wearing.



E. RUBBERWELD (with plastic head)

Has removable head of high-impact plastic. Body is long-wearing, resilient, and replaceable.

F. REINFORCED CANVAS

High quality Army Duck reinforced by plastic blocks on each side of stud hole for long wear.

The Bullard Clark Company

SOUTHERN DIVISION Charlotte, N. C.

JACOBS

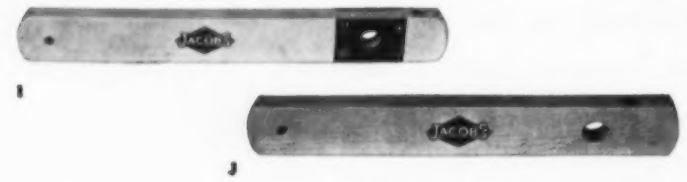
NORTHERN DIVISION Danielson, Conn.

G. RUBBERIZED FABRIC

Molded cloth and rubber. Reinforced at stud hole by plastic plates and built up at lug hole for improved performance.

H. LAMINATED

Constructed of highest quality Plyweld or Pakweld, in regular design or streamline style for lighter weight.



I. REINFORCED HICKORY

Made of highest grade hickory with fiber reinforcements at the stud hole for longer wear.

J. HICKORY

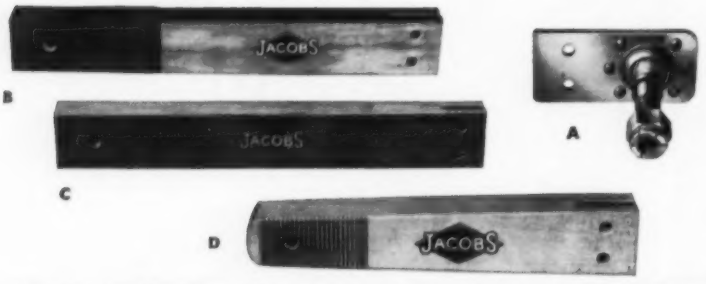
Highest grade hickory but without reinforcements. The most inexpensive sweepstick of the JACOBS line.

JACOBS *Can solve ANY Sweepstick or Connector Problem!*

PAGES
MISSING

Sweepsticks and Connectors

by JACOBS *For Maximum Loom Efficiency*



B

C

A

D

A. VAN-DAR HEAD

A replaceable rod end bearing for all types of JACOBS sweepsticks. Allows close fit on pick arm stud and avoids hole elongation to give a pick that is absolutely even. Heads and bodies are individually replaceable.

B. RUBBERWELD

Patented construction of chemically bonded plyweld and neoprene gives the smoothest, most resilient pick known to the industry.

C. RUBBERIZED FABRIC

Molded rubber combined with fabric. Uniform consistency assures maximum strength and length of life.

D. HICKORY

Made of highest grade stock. Economical and long-wearing.

E

F

E. RUBBERWELD (with plastic head)

Has removable head of high-impact plastic. Body is long-wearing, resilient, and replaceable.

F. REINFORCED CANVAS

High quality Army Duck reinforced by plastic blocks on each side of stud hole for long wear.

The Bullard Clark Company

SOUTHERN DIVISION
Charlotte, N. C.

JACOBS

NORTHERN DIVISION
Danielson, Conn.

G

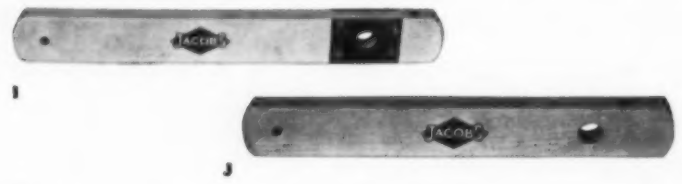
H

G. RUBBERIZED FABRIC

Molded cloth and rubber. Reinforced at stud hole by plastic plates and built up at lug hole for improved performance.

H. LAMINATED

Constructed of highest quality Plyweld or Pakweld, in regular design or streamline style for lighter weight.



I

J

I. REINFORCED HICKORY

Made of highest grade hickory with fiber reinforcements at the stud hole for longer wear.

J. HICKORY

Highest grade hickory but without reinforcements. The most inexpensive sweepstick of the JACOBS line.

JACOBS *Can solve ANY Sweepstick or Connector Problem!*

NEW EQUIPMENT PARADE

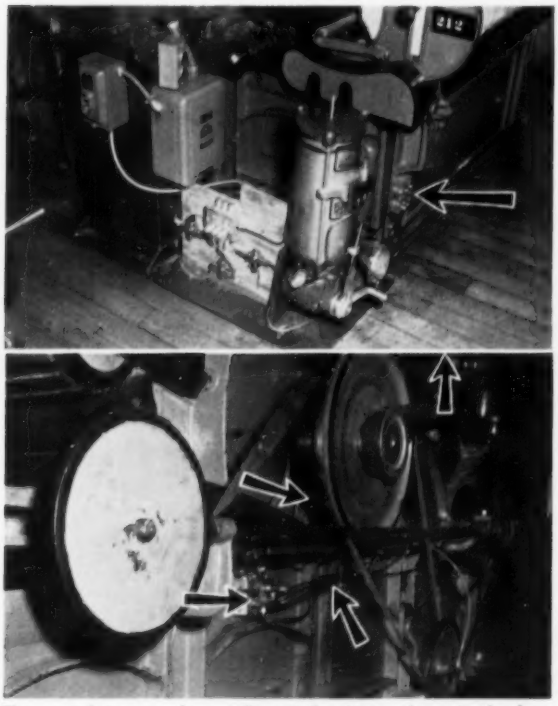
Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books

Please note: Claims made in all of these announcements of new developments are of necessity based upon information furnished by the respective suppliers.—The Editors

Central card lubrication system

The Trabon Centralized Lubrication System makes it possible to lubricate cards with grease from one or more control stations. The lubricant is supplied to each card bearing through a battery of copper or extruded nylon pipes.

The system consists of a central pump which has the capacity to supply grease to as many as 60 cards — actually the number of cards is limited to the back pressure set up in the pipes, and this back pressure is proportional to the pipe length. The system lubricates all points except those with lengthy lubrication cycles (such as one week).



The central pump and a small control unit are shown in the foreground of the top photo. The arrow in the picture points to one of the distributors which meter the grease needed by each bearing. In the lower photograph the arrows point to another distributor and the pipes which conduct the grease to the several bearings on this side of the card.

From the central pump the grease is conducted to distributor blocks fitted to the card frame. Through these blocks the grease is metered to each bearing — only a predetermined amount of grease, based on the actual bearing need, is thus allowed to pass through the pipes.

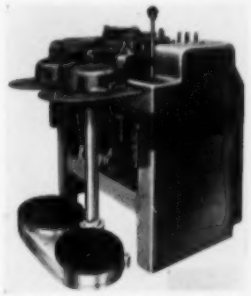
The central pump's capacity determines the time needed for each card's lubrication. Valves make it possible for an operative to divert the grease from the central pump to each card in turn, and to allow the grease to flow for as many seconds as is necessary for adequate lubrication. The pumping time for each card is determined at the plant level.

Trabon Engineering Corp., 28815 Aurora Rd., Solon, Ohio.

Do you want more data? Write ◆ or use card on page 183; list H-101

Gill reducer 50% faster

The increased production offered by the Super Gill over conventional machines is achieved by stepping up the entering speed from 10 to 15 ypm while reducing faller drops from 1800 to 1500 per minute. The machine will boost production by as much as 50%.



Additionally, the machine has been simplified in design to reduce the number of working parts, thereby eliminating causes of wear and cutting maintenance cost to the user.

Also incorporated in this concept of gilling is a variable speed drive which permits the operator to make draft changes quickly by simply setting a dial while the machine is in operation.

Coilers are designed to operate at a minimum surface speed of 165 ypm. This is accomplished by using heavier pitch gearing, anti-friction bearings throughout, and balanced coiler gears. Coiler drive gears rotate in an oil bath. An adjustable tension for calender rollers is also included.

The design allows the screw gears to remain in time when the head is opened. The fallers are constructed with solid, drilled through and pinned middles having high grade tool steel ends. Silent chain drives eliminate noisy gears and result in quiet, efficient operation.

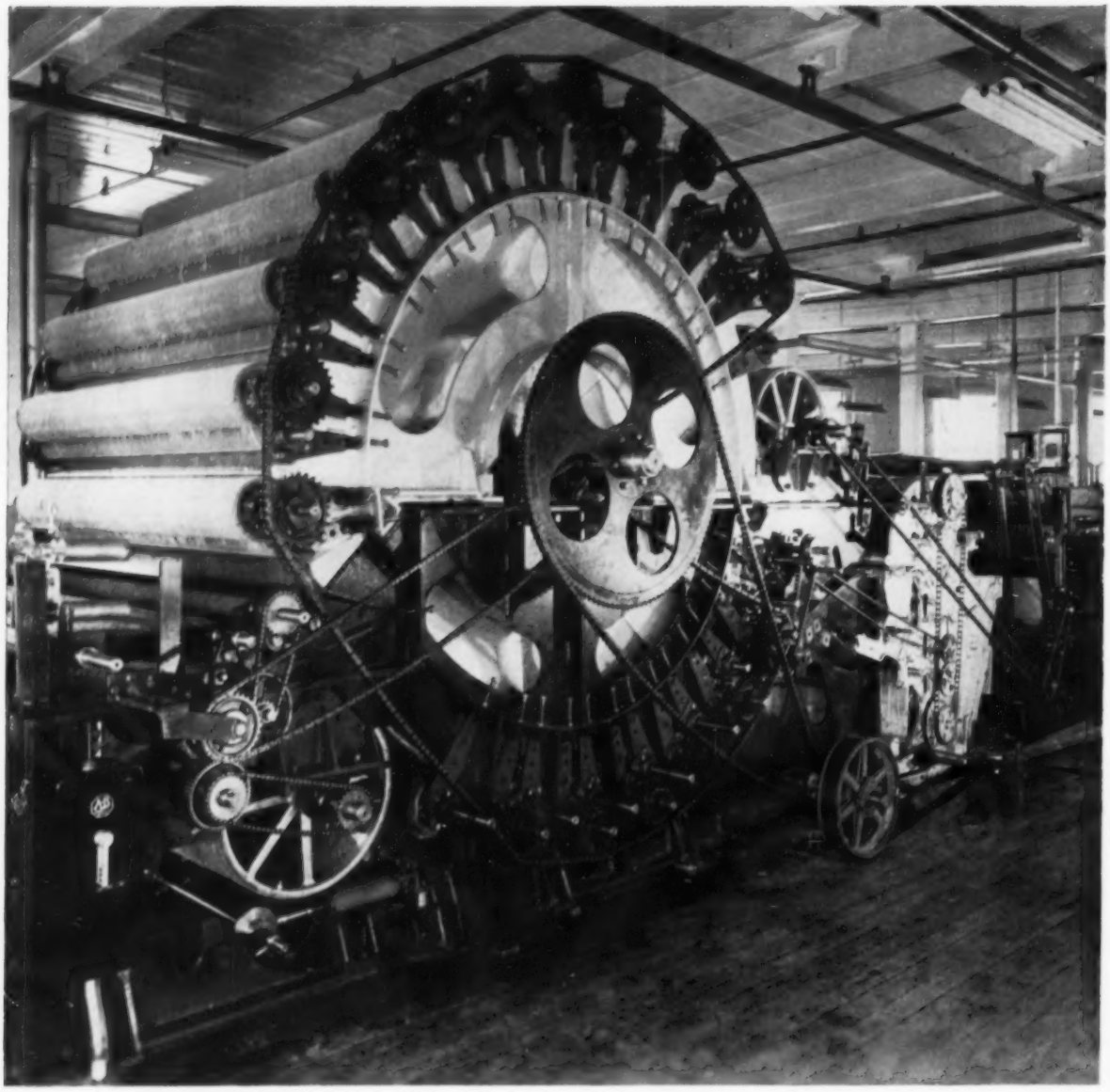
Holdsworth Mfg. Co., Inc., EE Sabin St., Pawtucket, R. I.

Do you want more data? Write ◆ or use card on page 183; list H-102

Examining form for seamless hosiery

The Reading Flat Non-Expanding Examining Form for seamless hosiery is used for stacking dozen lots in its bin with an automatic release into a stocking carrier underneath the machine. The automatic release can be disengaged for hand folding into bags.

Designed to provide the most accurate and economical means for examining seamless hosiery, this equipment



WHEREVER THERE'S A SHAFT THAT TURNS . . .

Wherever there's a shaft that turns in your plant, the success or failure of your operation depends on how well you transmit power to that shaft.

Belting, chain, gearbox, whatever the method of transmission, correct engineering is *essential.*

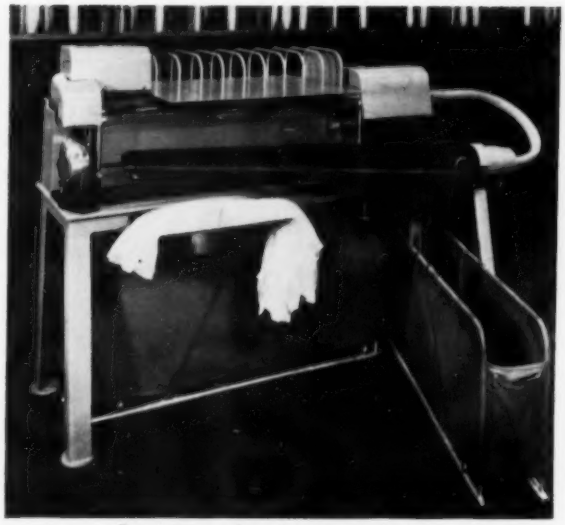
That's where SOUTHERN BELTING AND TRANSMISSION CO. comes in. Complete power transmission engineering is our stock-in-trade and we carry a complete line of power transmission equipment. If you have a problem, let us quote . . . you'll be pleased with the attention to detail and exactness of specifications.

Formerly SOUTHERN BELTING CO., we continue to manufacture the South's most complete line of textile loom leathers and flat belting . . .

Call or write our Engineering Department for details today!

SOUTHERN BELTING AND TRANSMISSION CO.

236 FORSYTH STREET, S.W. JACKSON 2-7221 ATLANTA, GEORGIA



Examining machine for seamless hosiery.

has, among other features, a 48" board length to accommodate the longest stocking; automatic turning and stacking operations; electronic controls using transistor units; self-contained vacuum unit.

Vacuum is applied only during the removal cycle—no vacuum interference while the stocking is being placed on form; stockings are released to carrier in dozen units, or buzzer is sounded instead of releasing stockings to carrier.

The angle of form mounting is quickly adjustable for both longitudinal tilt and correct glare-free working position.

An electrically operated stocking counter with 10 dozens capacity may be set to lock automatically at any point between 1 and 10. The vacuum cycle may be halted at any time by a simple foot-operated switch.

Textile Machine Works, Reading, Pa.

Do you want more data? Write ◆ or use card on page 183; list H-103

Static bar will not short out

The Super Service Static Bar, in addition to having maximum neutralizing efficiency, has been designed to require no maintenance other than an occasional brushing or blowing off of the points. Because of its construction, nothing can fall inside the bar to short circuit it internally, thus making it especially adaptable to use in dirty locations.

Made in two cross-sectional sizes, ⅝" square in short and medium lengths up to 60", and 1¼" square in spans up to 12 feet, the complete system consists of one or more of the static bars connected to a power unit operating from a-c service.

The Simco Co., 920 Walnut St., Lansdale, Pa.

Do you want more data? Write ◆ or use card on page 183; list H-101

Machine for padding or spraying latex

A machine developed for the application of backing compounds to upholstery and other fabrics incorporates a pin tenter chain, a three-pass recirculated hot air drying chamber, and a latex spreading head with a stainless steel padding roller assembly for applying the heavier weights of latex, normally from 2 oz per square yard and upwards, and a spray nozzle assembly for applying weights of latex less than 2 oz per square yard.

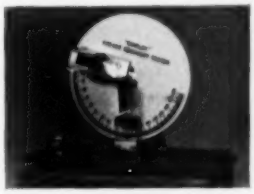
The machine can apply heavily filled compounds for the tufted carpet trade, or very fine high grade latex compounds for light weight fabrics where lack of penetration is important. In using the padding roller alone, a substantial variation of coating can be achieved, due to the variable speed drive on the lick roller and the controlled angle of the doctor blade. The drying chamber provides extremely efficient drying, due to the amount of high velocity hot air impinging on the fabric.

British Tufting Machinery, Ltd., Whitebirk Dr., Blackburn, Lancs., England

Do you want more data? Write ◆ or use card on page 183; list H-105

Crease recovery tester

The Shirley Crease Recovery Tester is designed for normal laboratory testing of the crease recovery properties of fabrics. It is extremely simple to use and is valuable where cotton or rayon is being subjected to a process which improves the crease recovery powers. One advantage it offers is that crease recovery properties can be tested under standard conditions and a numerical value attached to the performance of the fabric.



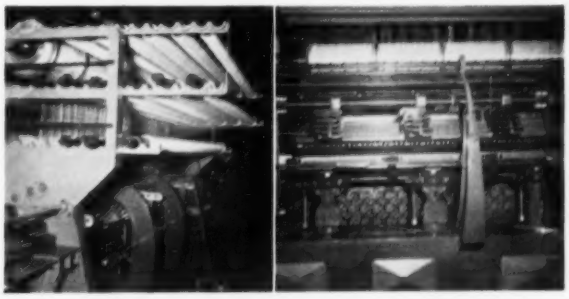
A specimen is cut from the fabric with a template 2" x 1". It is carefully creased under predetermined conditions of time and pressure. The specimen is then transferred to the fabric clamp on the instrument and allowed to recover from the crease—as it recovers the dial of the instrument is rotated to keep the free edge of the specimen in line with the knife edge and at the end of the test period the recovery angle in degrees is read on the engraved scale.

Shirley Developments, Ltd., 40 King St. West, Manchester 3, England

Do you want more data? Write ◆ or use card on page 183; list H-106

Make wide strip laces on 18-bar raschel machine

An 18-bar raschel knitting machine on which wide strip laces can be made, has been developed and is now commercially available. Called the Super Garant, it has



conventional knitting elements, and its needles are long, hook-latched. Knitting speed up to 300 stitches per minute is possible.

Mayer Textile Machine Corp., 5603 Park Ave., West New York, N. J.

Do you want more data? Write ◆ or use card on page 183; list H-107

Checking chlorine costs?

THE SECRET: ECONOMICAL SHIPPING

...first get the facts from Wyandotte

Wyandotte Chlorine is made in centrally located plants, from purified brine pumped from our own salt wells. This continuous control from the basic ingredient to economical delivery of the finished product, assures top quality and value.

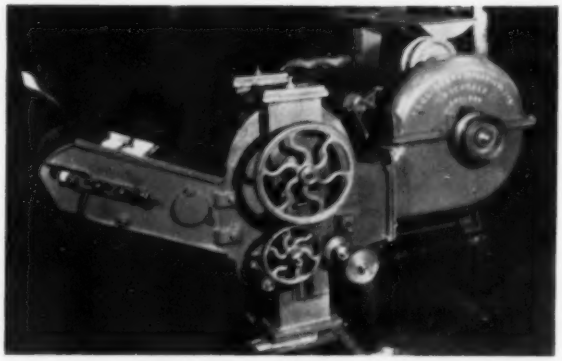
Tank-car interiors are inspected after each trip. While loading, the contents are sampled and analyzed; then given a final test before shipment. And the efficient, low-cost routing of all shipments—the result of years of experience in rates, regulations, and carriers—helps you save on transportation charges and time.

For complete product data or qualified assistance on how to best apply our products, save time and money, and increase your production efficiency, call our expert technical staff for qualified assistance, or write: *Section TI, Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION

Extracts thread waste from floor sweeps



A Thread Extractor for reclamation of thread waste from the weaving, winding, and spinning operations receives floor sweepings from those departments in an unpicked state.

Within the machine are three rotating beaters which agitate the waste material sufficiently for the foreign matter and the dust to pass forward to the fan and cage section, and to the lattice delivery. The threads are wrapped around the beaters in a continuous form.

When sufficient threads are collected on the beaters, the machine is stopped and the threads removed by a special knife provided as part of the equipment.

Tomlinsons (Rochdale) Ltd., Soho Works, Oldham Rd., Rochdale, England

Do you want more data? Write ◂ or use card on page 183; list H-108

Full- and knee-length ladies' seamless hose knitters

The Whitehead Patent Moretta Type MD400 circular knitting machine for making full-length ladies' seamless hose in lace design, honeycomb micromesh, or plain fabric is now available to U. S. knitting mills through a Canadian agent. The 400-needle unit has a 3¾" diameter cylinder with double feed.

Main features of the machine are: double feed in plain as well as in micromesh, automatic patented welt-turning, automatic take-down device with constant tension and draw separating course, 28-step selector device, lace garter band, picot edge, pyramid or cuban heel, "Y" heel construction, gusset toe, looping under the toe, mock seam, humidifier, electric stop motion, electric pilot lights, reinforced heel and toe attachment.

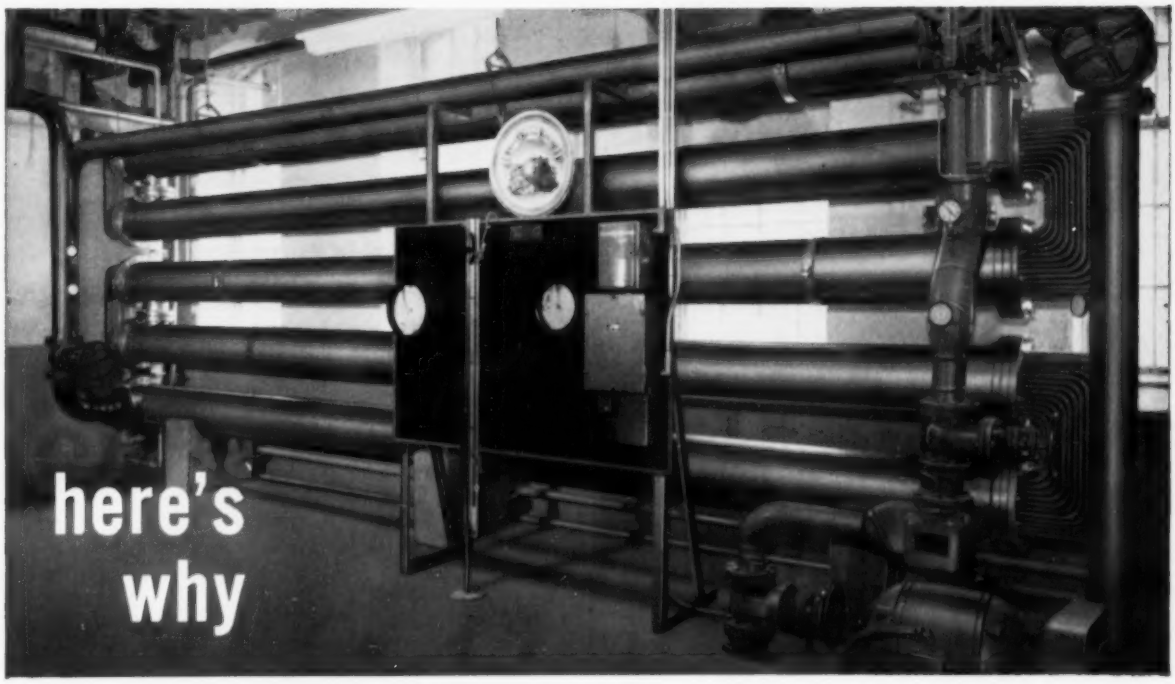
Also available is a "Universal" model for ladies' knee-high seamless hose with elasticized knitted-in top-band. This 360-needle unit with double feed also has a 3¾" diameter cylinder.

Staroba Industrial Research Co., Ltd., 299 Adelaide St. W., Toronto, Ont., Canada.

Do you want more data? Write ◂ or use card on page 183; list H-109

Lap pins pneumatically freed

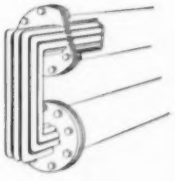
A labor and time-saving device for use on pickers, known as L & H Pneumatic Lap Pin Pusher, uses the principle of air pressure to free lap pins from both cotton and synthetic laps. Carefully engineered, this pusher can —with 80 psi air pressure—exert up to 1000 lb "push" on the pin ends, firmly driving the pin from 6" to 8", per-



textile finishing plants recover MORE DOLLARS from process waste water with a Bready System of Heat Recovery

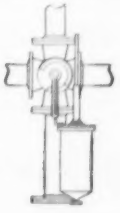
❶ Guaranteed to recover all of the heat economically feasible — *continuously*. ❷ Guaranteed self-cleaning — there is no efficiency loss due to fouling and plugging — no down time. ❸ Automatic operation — requires only a periodic mechanical checkup. ❹ Expansible — easily keeps pace with any future plant growth. ❺ Lowest maintenance cost —turns more B.T.U. into profits.

No textile or laundry plant should overlook the inherent advantages in a Bready system for recovering the heat from process waste water. Equally important is Ludell engineering know-how. Over thirty years of specialization in the field of heat recovery is in back of these systems. To date, there have been over one-thousand installations. It will pay you to investigate a Bready System of Heat Recovery for your own plant. Send a card to Ludell today for complete details.



CONTINUOUS TUBES. Only the Bready System has the patented continuous tube feature that permits lint and other solids to be completely back-flushed directly to the sewer. Once a solid enters a tube, it will pass completely through the tube.

NO MULTIPLE TUBE SHEET ENTRANCES. There are no cavities or tube sheet entrances where solids can impinge, or accumulate and disrupt the flow of water through the system. Accumulation is confined to the inlet tube sheet for only a short period of time, after which at set intervals it is backflushed out of the system and *directly into the sewer* without being strained through another tube sheet.



AUTOMATIC BACK-FLUSHING. Timed automatic backflushing, combined with the Bready exclusive, continuous multi-tube construction, fully and completely prevents clogging or stop-up of the system and maintains maximum high heat transfer.

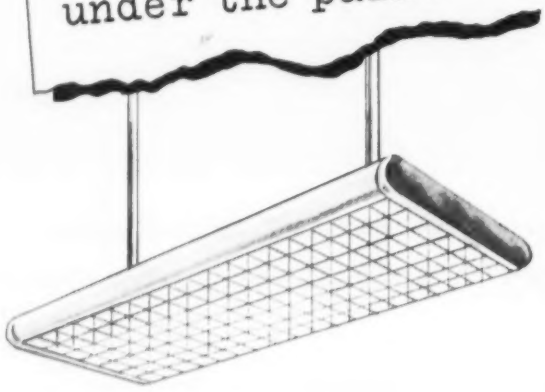
Ludell
Manufacturing Company
5200 West State Street • Milwaukee 8, Wisconsin
Dept. TI
Representatives in the United States, Canada and Alaska
MANUFACTURERS OF BREADY SYSTEMS OF HEAT RECOVERY, BREADY SYSTEMS OF HOT WATER HEATING, AND WHEELER SELF-UNLOADING WASHER

MEMO: to PAs

the fixtures you buy will look better, last longer with

CrysCoat®

under the paint



A fixture that's been CrysCoated *first*, then painted, keeps its light reflectance and appearance far longer in industrial service.

It's been proved year after year on many "famous name" products that nothing surpasses CrysCoat for bonding paint to metal . . . for preventing peeling despite high humidity . . . for blocking creeping rust at accidental nicks and scratches. When you replace fixtures insist on a CrysCoated product. For new plant construction, discuss it with your architect.

P.S. Don't stop with lighting fixtures! Fans, water coolers, metal furniture, steel lockers, tractors . . . whatever your needs, you'll find nationally-known brands CrysCoated to look better, last longer. For more information about CrysCoated products, write Oakite Products, Inc., 26C Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE®
MATERIALS · METHODS · SERVICE
SCIENCE

CrysCoat *paint-bonding treatment makes products look better, last longer.*

Export Division
Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

mitting easy removal from the lap.

This device is operated by a foot control valve, freeing both hands of the operator for complete removal of the pin; it also relieves the operator of fatigue in pulling lap pins from laps, particularly from synthetic stocks.

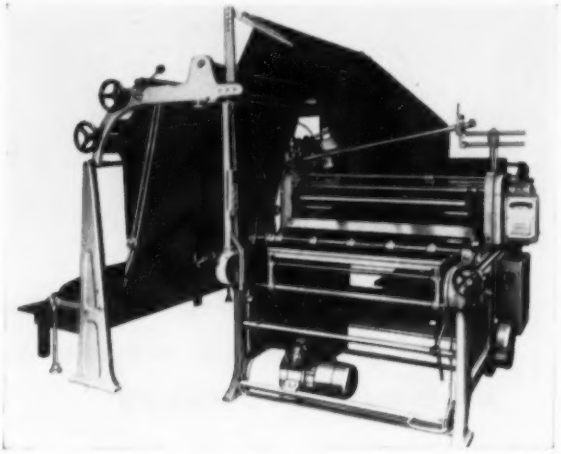
Livingston & Haven, Inc., Charleston, S. C.

Do you want more data? Write ◆ or use card on page 183; list N-110

Measuring and folding machines feature exactness

Exact measuring and perfect staples characterize the measuring and folding machines built by A. Monforts Maschinenfabrik. M. Gladbach, Western Germany, and sold and serviced by a supplier in the United States.

A wide range of various types and sizes covers all



practical requirements. The types to pass government inspection for exactness hold a tolerance of ± 0.2% for folds of 1 yard in length. This is obtained through a tension relieving device actuating immediately before the cloth is nipped by the fold-holders at each extreme of the stroke.

Exact selvage control is assured through electro-automatic guiders, the single type being intended for folding of open goods whereas the double type assures an accurate doubling, selvage over selvage. When doubling delicate or preshrunk fabrics, preference is given to a special electro-automatic guide rod selvage control apparatus.

The folding table is lowered automatically after each fold has been made, maintaining its horizontal position. This lowering motion proceeds exactly in relation to the thickness of the fabric so that the uppermost fold always remains in the same position and a bunching-up of the fabric is prevented. The folding table can be brought to its lowest position by means of a hand lever, and it is released to its starting position by a foot pedal.

Other types, exempt from government inspection, have variable fold length ranging from 31.5 to 157".

Cocker Machine & Foundry Co., Box 431, Gastonia, N. C.

Do you want more data? Write ◆ or use card on page 183; list N-111

Knits up to 45 sweater strips per hour

The Philip multi-feed interlock machine produces up to 20 lb of sweater bodies and sleeves with attached 1 x 1 waistband and cuffs with draw thread separation per hour. The machine has independent stitch controls.

Built by Supreme Knitting Machine Co., Inc., the knitter is a 30-inch, 30-feed machine which knits at ap-

proximately 23 rpm continually without slow down for changes.

While knitting the cuff, the Philip method moves yarn from odd-numbered feeds to double the yarn in even-numbered feeds by lifting yarn carriers out of contact with needles. This is accomplished without use of striping boxes or movable camming, and thus a major source of maintenance downtime and production loss is eliminated.

When the cuff is completed, the yarn moves back to odd-numbered feeds to knit interlock body. Draw thread and separating cast-off are handled by two additional feeds.

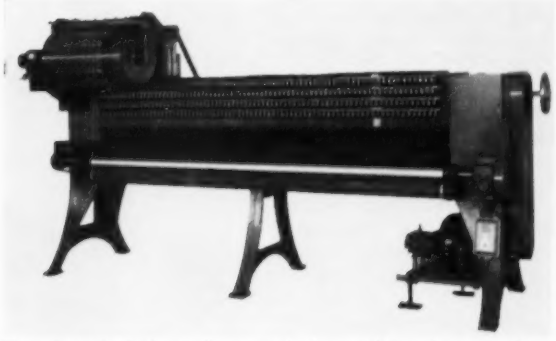
Morris Kaplan, K&J Trading Corp., 932 Madison St., Brooklyn 21, N. Y.

Do you want more data? Write ◂ or use card on page 183; list H-112

Tufting machines with individually controlled needles

The automatic production of patterned bedspreads is accomplished by a machine which eliminates costly overlaying operations. The machine is being built in a 115" width, and in 3/8" gauge to produce 100 units per eight hours of operation.

Referred to as a "Controlled Needle Yardage Tufting Machine," the patterns made on it are effected by putting the tufts into the sheeting, or by taking selected needles out of operation, leaving the sheeting bare. This makes



Through individual needle control the machine above produces patterned bedspreads without costly overlaying operations.

Since each needle in the machine is individually controlled, there are no pattern limitations, and any design can be made.

a dependable source of supply for your

TEXTILE NEEDS

WATSON And DESMOND

Our Products are outstanding and are Quality Proven. Our knowledge of textile supplies and equipment is up-to-the-minute.

- ADOLFF PAPER SPINNING TUBES & QUILLS
- WATSON-WILLIAMS SHUTTLES
- DYETUBES & HEADLESS SHIPPING PACKAGES
- ANTIFRICTION TOP ROLLS FOR SPINNING AND ROVING
- ALL TYPES OF WOODEN BOBBINS, CONES AND SPOOLS
- PLASTIC QUILLS . . . SHUTTLE FUR
- HUMIDIFIERS
- ZINSER SKF ROLLER BEARING SPINDLES
- R & F SPINNING & TWISTER RINGS
- MAIER PRIMA FLYERS
- DUBO SPINDLE LOCK WASHERS
- SCHOFIELD DRAWING FRAME CONDENSERS
- TOENNIESSEN TAPERED BOARD YARN INSPECTION APPARATUS
- USED MACHINERY . . . MILL PROPERTIES

Just Call or Contact:

Edgar E. Ball, J. N. Dodgen, Phone ED 3-6154, Charlotte, N. C.

Richard V. McPhail, Box 1174, Phone UN 5-8631, Gastonia, N. C.

John Wyatt, P. O. Box 701, Phone 3-3012, Greensboro, N. C.

Hugh K. Smith, P. O. Box 472, Phone 5-5361, West Point, Ga.

Ray A. Norman, Box 779, Phone 2-1341, Greenville, S. C.

Or Write Direct To:

WATSON & DESMOND

Phone: EDison 3-6154

P. O. Box 1954

Charlotte, North Carolina

The Laurel Leaf

BUSINESS MAGAZINE EDITION

YOU SHOULD KNOW ABOUT THE
NEW, IMPROVED
LAUREL SOFTENER 3BH SPECIAL

Here's good news for producers of Orlon and Acrilon fiber and yarns. Now, for the first time, you can greatly reduce troublesome fly and lint formation at the pin drafters and during subsequent processing, and at the same time obtain a better, smoother-running knitting yarn.

These features tell why this job-proved Laurel *Quality* Product will do the job *better* for you:

- No adverse effect in subsequent drawing and spinning.
- Excellent stability and uniformity: it's *double* homogenized!
- Of low viscosity . . . may be used without dilution if desired.
- Has no adverse effect on shades . . . highly resistant to discoloration and odor formation in storage.
- Completely saponifiable for easy scouring.

Ask your Laurel Sales Representative to provide complete facts, details and a generous sample of this newest Laurel *Quality* Product.

A good time to do it is now!

Laurel Brand

Laurel SOAP MANUFACTURING CO., INC.
TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses:
Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C., Greenville, S. C.

the pattern appear as contrasting tufted and untufted areas.

Since each needle in the machine is individually controlled, there are no pattern limitations, and any design can be made either with or without repeats. The pattern controls are electric; and pattern changes are relatively inexpensive and easy to make.

Along the same line is another machine built for making bath mats and bath sets. This also is a controlled needle machine, and it is being built only in 30" width, 3/16" gauge. It has a two-needle control, and as in the bedspread machine, the pattern is made by putting in or leaving out tufts. It would be possible to run a light tufted fabric, or cut pile or loop pile through this machine and overlay a design on a low ground fabric. This machine is expected to produce 600 linear yards per eight hours of operation.

Cobble Brothers Machinery Co., Riverside Drive, Chattanooga, Tenn.

Do you want more data? Write ◂ or use card on page 183; list N-113

Aluminum twister bobbin has identification rings

An anodized twister bobbin has a knob which includes a special recessed ring for color code identification. Fitted with paper rings of varying colors, this recess in the grip knob provides immediate visual identification for different yarns, permitting the user to color code by types of yarn, differing operations, etc., for easy and immediate separation during production.

The all-aluminum barrel and heads are brazed together, and the bobbin is completely anodized to prevent corrosion of any kind. This construction without joints prevents trapping of yarn. No cracks or crevices exist between the heads and the barrel. The bobbin will stand up to continual steaming and twisting of high tensile nylon yarns.

Allentown Bobbin Works, Inc., Allentown, Pa.

Do you want more data? Write ◂ or use card on page 183; list N-114

Automatic F-F machine—3 hand operations

An automatic, non-stop, full-fashioned hosiery machine leaves only three manual operations for the knitter. These are: cut ends, pick up work, and put up picot bars. Thus, only six minutes of manual effort are required per set, and this amounts to only 12 minutes out of 30-35 minutes for one set each on two machines, since one knitter can operate both machines.

The 32-section machines are made to produce 39, 60, 66, or 75 gauge work. All frictions are automatically engaged and disengaged. All carriers are automatically introduced and automatically idled. Carrier rod and narrowing spindles are motor-driven and automatically reset to starting position. Positioning where required is also automatic.

An automatic size changer eliminates the need for changing buttons or chains. Leg length, foot length, and

size marks are dictated by simple lever shift. Automatic hook-up of take-up straps eliminate hand operations.

Karl Lieberknecht, Inc., P.O. Box 717, Reading, Pa.

Do you want more data? Write ◆ or use card on page 183; list H-115

Thermosetting resins for cotton and nylon

Availability of three new thermosetting textile resins has been announced.

Hartoresin S-50 is offered as a high-solids, stabilized urea-formaldehyde resin syrup. It is useful as a stiffening agent for nylon net materials and as a bodying resin for "wash-wear," schreinered, embossed, and glazed finishes on cottons. Higher storage and bath life than unstabilized urea resin syrups is an advantage.

Hartoset F-60 is offered as a modified urea-formaldehyde resin for stiffening and flame-retardant finishes on nylon laces, nets, and shoe-cloth. The product yields excellent stiff finishes without increasing the flammability of the fabric. It is available as a high-solids syrup.

Softolene A is a synthetic wax emulsion for use as a softener in resin formulations for cotton stabilization. It gives an excellent hand and an improvement in the tear-strength of the resin-treated cotton.

Hart Products Corp., 1440 Broadway, New York, N. Y.

Do you want more data? Write ◆ or use card on page 183; list H-116

Shearer permits varying cutter angle

The Universal High Speed Shearing Machine SR/1, SR/2 model with one or two cutters built by A. Monforts, Maschinenfabrik, M. Gladbach, Western Germany, designed for a high variety of applications, has a separate

drive for cloth transport and shearing cylinders which are driven by special motors over a V-belt.

The cutters can be tilted backwards to obtain the best cutting angle for every type of cloth. The shearing cylinders have 18 spiral blades and run in double needle bearings resulting in vibrationless operation of the machine. Either pointed or hollow shearing beds can be supplied and are interchangeable, depending on the type of shearing required. The two-cylinder type is normally equipped with a seam skipper while this is optional on machines having one shearing cylinder only.

A draw roller is located immediately behind each shearing table so that stretch caused by the cloth transport is reduced to a negligible amount even when shear-

Zinser
TAPERED TOP DRIVE
STEEL BLADE
SMALL WHORL DIAMETER AFFORDS REDUCTION IN CYLINDER SPEED
THIS FILLING SPINDLE
EQUIPPED WITH SKF - ROLLER BEARING -
STEEL BASE WITH RUST-RESISTANT FINISH
MEETS YOUR REQUIREMENTS - CUTS YOUR POWER COSTS

EXCLUSIVE U. S. SELLING AGENTS

WATSON & DESMOND

P. O. BOX 1954 CHARLOTTE, N. C.

NEW The Automated MICRONAIRE

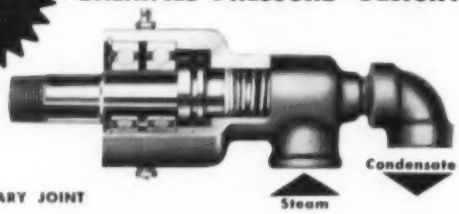
- Speeds up checking two to three times
- Prevents operator fatigue
- Less chance for inaccurate reading
- Safe—both hands operate valves simultaneously
- New automated models now available for immediate delivery

For NEW Book "Advantages and World-Wide use of the Micronaire in all segments of the Cotton and Textile Industries"

Write to Dept. 29 — THE SHEFFIELD CORPORATION DAYTON 1, OHIO, U.S.A. 7515

the SHEFFIELD corporation
manufacture and measurement for mankind

SEALOL ROTARY JOINT FEATURES "BALANCED PRESSURE" DESIGN!



TYPE S ROTARY JOINT

SEALOL — The Seal Specialists — have designed a rotary joint which incorporates the outstanding design features of THE BALANCED PRESSURE SEAL.

- Low Torque
- Long Life
- Automatic take-up for normal wear
- Leak-proof
- Choice of carbon or ball bearing
- Minimum maintenance

Write now . . . for Bulletin 14 . . . for complete data!

SEALOL CORP
221 Post Road, Providence 5, R. I.

Boston • Buffalo • Chicago • Cleveland • Denver • Greenville, S. C. Jacksonville • Kansas City • Los Angeles • Milwaukee • Mobile, Ala. Newark • New York • Philadelphia • Pittsburgh • San Francisco Seattle • Tulsa • Washington, D. C. • Wheeling, W. Va. • Toronto, Canada

SEALOL
THE BALANCED PRESSURE SEAL

ing light and very elastic cloth. Cloth transport rolls can be disconnected from their drives. Cloth can then be moved back or forth by means of a hand wheel. A nap raising roll with steplessly variable speed can be installed.

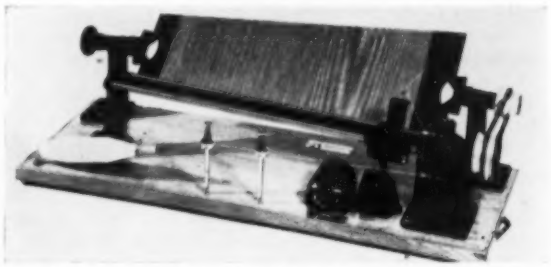
The cloth speed can be steplessly varied within various ranges, the top speed of a double cylinder shear being 50 ypm. Although the general design of the model SR shear is compact and enclosed, easy accessibility to the cloth run is assured. The machine is built in various cylinder widths up to 94.5".

Cocker Machine & Foundry Co., Box 431, Gastonia, N. C.

Do you want more data? Write ◂ or use card on page 183; list H-117

Spot defective yarn quickly with this tester

With the Toenniessen yarn inspection device, which consists of a driving mechanism that rotates a removable tapered black board at any desired speed and places a single strand of yarn on the board at any desired number of wraps per inch, immediate detection of patterns or



defects in yarn is possible—they show up vividly on the tapered board. Thus, source of the defect can be quickly determined and corrective action taken to avoid high processing costs because of inferior yarn and excessive machine downtime.

The machine is furnished with a set of ten tapered boards so that a series of studies can be conducted at the same time; they are easily inserted in the device. An automatic stop motion allows an operator to insert a board, start the machine, and then give his attention to other matters while the board runs full and stops.

Watson & Desmond, 220 West 4th St., Charlotte, N. C.

Do you want more data? Write ◂ or use card on page 183; list H-118

Two opening-cleaning units now one

A blending feeder which incorporates in a single unit the features formerly associated with two separate pieces of equipment is now available. The Blending Feeder and the Axi-Feed (for details on the Axi-Feed, see TI for October, 1954, p.113), formerly available as an accessory only, combined as a unit give better quality opening and cleaning at the very start of the opening process.

Called the Axi-Feed Blender, the machine uses the same floor space as the conventional blender and requires no additional motors. The blender is 36" wide and is equipped throughout with pre-packed antifriction bearings.

Model N4 has a rotary pin cylinder in the hopper section. The Model N5 is created by replacing the pin cylinder by an oscillating Sargeant comb for opening cotton waste such as comber noils and card strips. This model is also recommended for opening synthetic fibers.

Both models have the usual doffer which removes the

stock from the spiked elevating apron and carries it over the first section of the adjustable grid bars located beneath the doffer and then to the Axi-Feed unit.

Whitin Machine Works, Whitinsville, Mass.

Do you want more data? Write ◀ or use card on page 183; list H-119

Equipment briefs

A direct dye, bluish gray in shade, Lumicrease Cuprofix Grey 3LBN p.a.f., and with fastness which is required for automotive and decorative fabrics, has good wet fastness. The dyestuff is stable to hard water. With level dyeing properties, it is suitable for application by all conventional methods. Reserve of nylon and acetate is exceptionally good.

Sandoz Inc., 61-63 Van Dam Street, New York, N. Y.

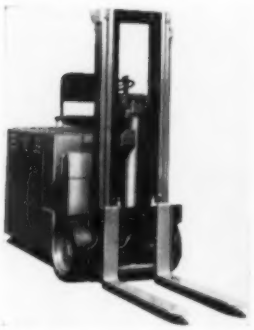
Do you want more data? Write supplier or use card on page 183; list H-201

Right angle gear motors from ¼ through 5 horsepower in all enclosures are now available. Gear case and motor housings are of aluminum alloy. This heat treated aluminum casting absorbs the high torque characteristic of gear motors, has good heat transfer properties, and is corrosion-resistant. Since many gear motors are applied on lighter pieces of machinery and often require portability, the aluminum construction offers an evident savings in weight—built for rugged continuous duty.

Sterling Electric Motors, Inc., 5401 Telegraph Road, Los Angeles 22, Calif.

Do you want more data? Write supplier or use card on page 183; list H-202

Higher over-all fork truck lifting ranges and shorter turning radii are offered in a series of masts known as the Duoscopic (has a 2 to 1 lift ratio and will be used on fork trucks of all capacities) and Triscopic (has a 3 to 1 lift ratio and provides greater free lift before mast extension begins). Both masts are compact. Channel uprights are milled from solid high-carbon steel bar stock, providing an assembly with full strength and rigidity in a narrower channel.



The Mercury Mfg. Co., Div. of Pettibone Mulliken Corp., 4044 South Halsted St., Chicago 9, Ill.

Do you want more data? Write supplier or use card on page 183; list H-203

Two nonionic detergents, Syntergent 35-K and Syntergent 35-T, for the scouring of raw wool at low temperatures, are designed to replace conventional scouring with alkalis or other nonionic detergents. Syntergent 35-K is applicable to all types of wool, but Syntergent 35-T is specifically suited to carpet wools. Eliminating the use of alkalis in the scouring liquor results in a softer, loftier, and whiter wool. Since the fibers retain their natural elasticity, the stocks are easier to card, draft, and spin. Additional advantages include low scouring temperatures of 120 F to 130 F and improved color of recovered wool grease.

Textile Chemicals Division, Nopco Chemical Company, Harrison, N. J.

Do you want more data? Write supplier or use card on page 183; list H-204

An inexpensive photoelectric instrument, the Gloss-

NEW BOBBIN MANUAL

Only complete, authoritative bobbin guide in the industry

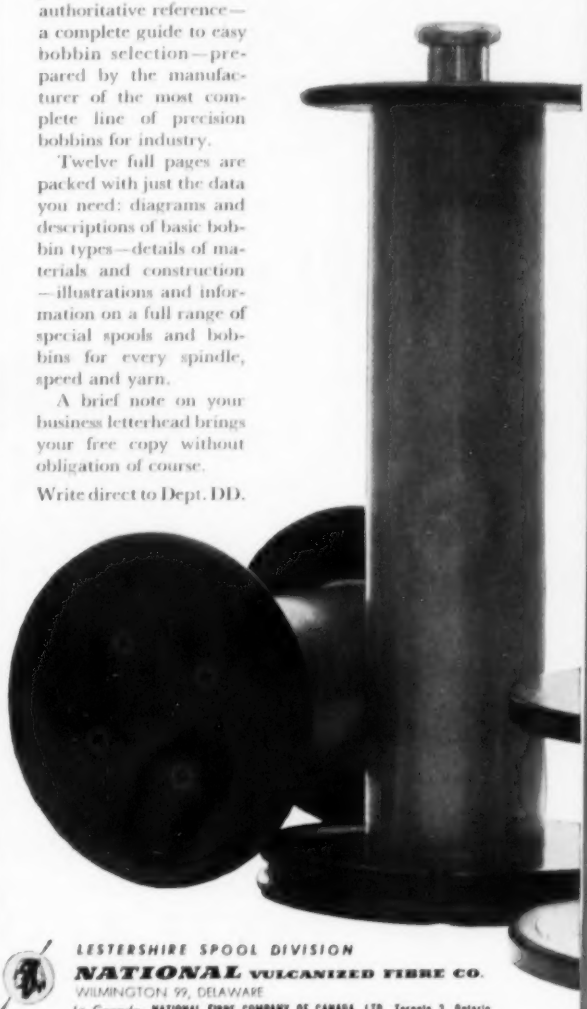
"Most useful book on bobbins ever written!" That's how users describe Lestershire's new Bobbin Guide.

Actually, this new Manual is far more than just a catalog. It's an authoritative reference—a complete guide to easy bobbin selection—prepared by the manufacturer of the most complete line of precision bobbins for industry.

Twelve full pages are packed with just the data you need: diagrams and descriptions of basic bobbin types—details of materials and construction—illustrations and information on a full range of special spools and bobbins for every spindle, speed and yarn.

A brief note on your business letterhead brings your free copy without obligation of course.

Write direct to Dept. DD.



LESTERSHIRE SPOOL DIVISION
NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE
In Canada: NATIONAL FIBRE COMPANY OF CANADA, LTD., Toronto 3, Ontario

meter System Lange, for measuring gloss and polish of metal, glass, paper, textiles, etc., operates either on a 4-volt battery or on 110 volt, 60 cycle current (through a small transformer). Several accessories, such as a silver mirror, color filters, etc., are available. The entire radiation hits the photocell. Terminals are provided for connection to a special Multiflex galvanometer for reading of photo-electric current emitted by the cell, which is directly proportional to the measured gloss.

Epic, Inc., 154 Nassau Street, New York 38, N. Y.

Do you want more data? Write supplier or use card on page 183; list H-205

Aluminum trolley hoists are available in hand-geared and push-type models. The hand-geared line includes models with capacities from one through ten tons. The push-type trolley hoists have capacities ranging from one-quarter ton through ten tons. Both types are adaptable to a wide range of I-beam sizes by rearranging spacer washers on the cross shafts. The "Budgit" Aluminum Army Type Hoists feature cadmium-plated hand chains which are impervious to rust and corrosion.

Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Div., Muskegon, Mich.

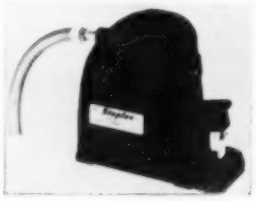
Do you want more data? Write supplier or use card on page 183; list H-206

A complete line of industrial television equipment designed to satisfy the demands of every application from the least expensive to the most elaborate is available in two models of cameras. All accessories and components are fully integrated in the systems and are interchangeable for use with either camera chain.

Industrial Television Sales Department, Allen Du Mont Laboratories, Inc., 760 Bloomfield Ave., Clifton, N. J.

Do you want more data? Write supplier or use card on page 183; list H-207

An air-powered stapling machine for fastening bags, paper, forms, etc., is ruggedly built for use wherever a pneumatic line is available. Called the Air-Stapler, Model SA-100, the machine is equipped with a three-way air switch valve for either foot, knee, or hand operation. Portable, the unit uses ¼" leg staples.



The Staplex Co., Industrial Division, Brooklyn, N. Y.

Do you want more data? Write supplier or use card on page 183; list H-208

The dyeing of hitherto "difficult" synthetics is simplified by a carrier called Carolid. The carrier goes into true solution and is exhausted into the fabric. This factor eliminates the danger of spotting and allows extremely level dyeing. The carrier is equally effective in simplifying the dyeing of Dacron and its blends, Arnel, Darlan, Dynel, Verel, etc.

Tanatex Corp., Belleville Turnpike, Kearny, N. J.

Do you want more data? Write supplier or use card on page 183; list H-209

Bright greenish yellow shades of excellent fastness to light and good fastness to washing on cotton, viscose, and linen are offered by Procion Brilliant Yellow 6G. It is readily applied by all the established methods such as pad-steam, pad-bicarbonate-dry, and cold batchwise methods. Does not cause catalytic fading of other Procions and does not accelerate the tendering of cellulose on exposure to light.

Arnold, Hoffman & Co., Inc., 55 Canal St., Providence 1, R. I.

Do you want more data? Write supplier or use card on page 183; list H-210

NOW! cut your

desizing costs

with exsize-t

PABST Blue Ribbon

For faster, more complete action, at lower cost, desize with exsize-t, the No. 1 desizer for all fabrics.

ANOTHER FINE PRODUCT OF

PABST BREWING COMPANY

AMERICA'S OLDEST NATIONAL BREWERS—SINCE 1844

For detailed information write INDUSTRIAL PRODUCTS DIVISION • PABST BREWING COMPANY • Merchandise Mart, Chicago 54, Ill.

Belt take-up is accomplished on the Adjusto-Slide motor base by turning a single screw, and this can be done while the motor is running. On most models the adjusting screw can be loosened and swung aside, freeing the top plate and the motor to move far enough for removing the old and installing the new belt. Except for motor replacement the motor need never be removed from the base, which can be mounted vertically, horizontally, or inclined.

The American Pulley Co., 4200 Wissahickon Ave., Philadelphia 29, Pa.

Do you want more data? Write supplier or use card on page 183; list H-211

A plasticizer and chemical intermediate, Hyprin GP25, is being used as a plasticizer for some cellulosic products, and also offers possibilities as a plasticizer for other materials such as glue, starch, dextrin, cork products, and phenol-formaldehyde resins.

The Dow Chemical Co., Midland, Mich.

Do you want more data? Write supplier or use card on page 183; list H-212

Productive "on" time for any machine, process, or system is recorded by the Model SR Recorder and Totalizer. The instrument makes it possible for management to accumulate vital data on plant operations without the use of costly time study techniques, stop watches, etc. The total time a machine operates is recorded onto a 250' chart. An operations counter can also be included with or in place of the time totalizer.

Standard Instruments Corp., Div. of Heat-Timer Corp., 657 Broadway, New York 12, N. Y.

Do you want more data? Write supplier or use card on page 183; list H-213

"Walkie" electric truck control systems offering both "dynamic braking" and "controlled plugging" are now available. Release of the control lever or returning it to its vertical position while the truck is moving either forward or backward permits the dynamic braking to bring the truck to the gradual stop. Controlled plugging permits the operator to reverse the direction of the truck smoothly, and save wear and tear on the motor. Rubber-covered grips on the handle are turned to effect the desired response from the truck.

Lewis-Shepard Products, Inc., 125 Walnut St., Watertown 72, Mass.

Do you want more data? Write supplier or use card on page 183; list H-214

A nonionic emulsion of liquid wax for giving needed lubrication to weaving and knitting yarns, also lends softness to natural and synthetic yarns. Of low melting point, Syntharol ND is homogenized to insure stability.

Arnold, Hoffman & Co., Inc., 55 Canal St., Providence, R. I.

Do you want more data? Write supplier or use card on page 183; list H-215

A fire alarm system, particularly suited for medium and small factories, and where the use and storage of inflammable material presents constant fire danger, constantly warns of fire (alarm bell) and shows its location by means of indicator lights on a central control panel. Automatically operated by battery in case of power failure, the system can be equipped with as many fire detector units as needed. These units may be placed in any

greater accuracy
greater speed
longer life with

SHADOGRAPH

Weight indication by a beam of light removes all friction from indicating mechanism—assures extreme accuracy. Short lever fall and a special damping action give fast readings—1.1 seconds required per weighing. A rugged structure and time-proven craftmanship ensure trouble-free service. Model 4204, above, is designed so that the commodity receptacle, weight platter, beam and poise are exposed and a removable cover plate gives access to interior parts. All parts necessary to the weighing operation or weight changes are directly in front of the operator.

Hundreds of EXACT WEIGHT Scales are giving accurate, fast, trouble-free service in Textile plants both here and abroad.

EXACT WEIGHT Scales are available for color control, slashing, sliver test, yarn count, quality control, denier testing and checkweighing.

Model 4104, End Tower Shadograph, right, is precision designed for weighing samples in conjunction with the Sheffield Micronaire testing machine. Write for complete details.

Exact Weight SCALES

Find us in your local 'Yellow Pages'

Sales and Service Coast to Coast

THE EXACT WEIGHT SCALE CO.
922 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: P.O. Box 179, Station S, Toronto 18, Ont.

BETTER QUALITY CONTROL . . . . . BETTER COST CONTROL

desired location, are fully automatic and self-restoring. Optional arrangements of Zonalarm permit use of multiple alarm panels in groups or in different locations, and outdoor alarms.

The Edwards Co., Norwalk, Conn.

Do you want more data? Write supplier or use card on page 183; list H-216

A chlorine-resistant resin which has only a minimum effect on the light-fastness of dyestuffs, and which is recommended for both cotton and viscose materials, is available. Called Warcoset LCR, the compound is compatible with a wide variety of finishing agents. With excellent stability in storage, it is durable also to multiple launderings, and offers improved crease resistance, shrinkage control, and stretch control.

Warwick Chemical Div. of Sun Chemical Corp., 10-10 44th Ave., Long Island City, N. Y.

Do you want more data? Write supplier or use card on page 183; list H-217

Improved wash-fastness of direct dyes is offered by Culofix WFD. Used as an after-treatment, the compound is also of value when used in conjunction with Hydro-Pruf, its companion products of silicone water repellent and thermo-setting resins.

Arkansas Co., Inc., Newark, N. J.

Do you want more data? Write supplier or use card on page 183; list H-218

A humidity indicator, designed for measuring humidity of closed areas, can be located in office, laboratory or control room away from the area to be measured. An air line is run into the area to be sampled. A vacuum pump or line draws sampled air through the indicator. Readings to a guaranteed accuracy of plus or minus 1½% are obtained directly from dial. To keep the temperature in the indicator chamber at the same level as the sampled area, a temperature-compensating coil is built into the Remote Humidity Indicator.

Serdex, Inc., 91 Cambridge Street, Boston 14, Mass.

Do you want more data? Write supplier or use card on page 183; list H-219

A "fail-safe" overload control, called the "Load Sentry" is intended for use wherever overload of any kind may be registered on an electric motor. The maximum load to be permitted on the motor being monitored is set by an adjustable pointer anywhere on the dial of the meter-relay. Another pointer indicates the actual running load on the motor. When the pointers meet at an overload position, contacts lock and the circuit is broken. The control will then sound an alarm and/or shut down the system.

Assembly Products, Inc., Chesterland, Ohio

Do you want more data? Write supplier or use card on page 183; list H-220

A sizing for synthetic yarns consists of water-dispersible polyethylene, multimolecular size, and provides lubrication (no after-waxing needed) and static control to warp yarns. Polysize is particularly suited to Dacron in high and low twist. The compound is readily removed from fabrics by the ordinary scouring methods in use. Fuzzing, balling, and shedding are minimized.

Aquex Development & Sales Corp., Whippany, N. J.

Do you want more data? Write supplier or use card on page 183; list H-221

LOCKWOOD GREENE PROJECTS IN...

TEXTILE FINISHING

Lockwood Greene has completed projects in the Textile Industry valued at over three-quarter billion dollars and offers highly specialized engineering services in all phases of Textile Manufacturing including Textile Finishing.

Kendall Mills, Finishing Division of Kendall Co., Bethune, S. C.
A new cotton finishing plant, finishing the cloth produced by The Kendall Cotton Mills Division, which operates seven plants in North and South Carolina. It has approximately 300,000 sq. ft. of manufacturing and storage space.

CONTINUOUS MANAGEMENT SERVICES FROM SITE SELECTION TO PLANT COMPLETION

LOCKWOOD GREENE ENGINEERS · ARCHITECTS

BOSTON 16, MASS. 316 Stuart Street · NEW YORK 17, N.Y. 41 East 42nd Street · SPARTANBURG, S.C. Montgomery Building

OVER A CENTURY OF INDUSTRIAL PLANT EXPERIENCE · BROCHURE AVAILABLE UPON REQUEST

A liquid detergent designed for use in solution-lifting steam guns and self generating steam cleaning equipment, Oakite LSD, was developed to simplify the preparation of steam cleaning solutions and to reduce the clogging of coils in self generating equipment. It will handle a wide variety of steam cleaning operations ranging from light to medium-heavy duty, and provides effective soil removal at concentrations of 1 to 2 ounces to each gallon of water as delivered by the gun. Used as recommended, it is safe on steel, brass, magnesium, and on painted surfaces.

Oakite Products, Inc., 206 Rector St., New York 6, N. Y.

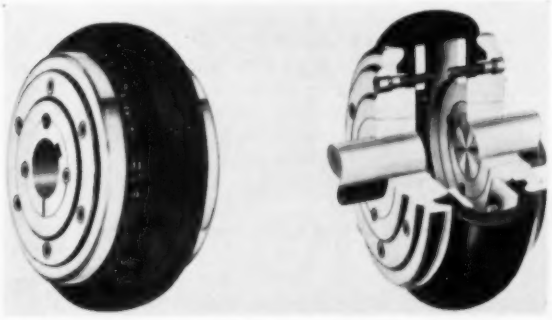
Do you want more data? Write supplier or use card on page 183; list H-222

Pillow blocks, equipped with lubricated-for-life ball bearings, are available in a range of bore sizes from ½" through 2 15/16". Mounting pads are furnished with each pillow block for interchangeability and can be used where increased base-to-center height is desired.

Sales Department, New Departure Division, General Motors Corp., 269 North Main Street, Bristol, Conn.

Do you want more data? Write supplier or use card on page 183; list H-223

A flexible coupling with the ability to handle angular mis-alignment, parallel mis-alignment, and end-float (and in any combination) also cushions shock loads and diminishes torsional vibration. The heart of the Paraflex Coupling is a tire with synthetic tension members



bonded together in rubber. The flexible tire is clamped between two hubs which are mounted on the shafts to be coupled. The tire has a transverse split molded into it which permits easy installation and makes replacement possible without moving driver or driven machine.

Dodge Manufacturing Corporation, Mishawaka, Indiana

Do you want more data? Write supplier or use card on page 183; list H-224

A bright red dye with good wet fastness and high light fastness on cellulosics offers excellent storage stability as well. Called Procion Brilliant Red H3B, the dye forms the basis of an attractive range of bright scarlets by admixture with orange or yellow Procions; its self shade is good. Printing pastes made of the dye are stable and have good working properties.

Arnold, Hoffman & Co., Inc., 55 Canal St., Providence 1, R. I.

Do you want more data? Write supplier or use card on page 183; list H-225

A cooler for drinking fountains is available in a floor-saving package unit designed for connecting to remote installations. Thus the cooler can be placed in a wall, under a counter, on shelves, or in cupboards, and connected to the fountain desired. A removable access and ventilation panel is available for wall recess installation.

The Halsey W. Taylor Co., Warren, Ohio

Do you want more data? Write supplier or use card on page 183; list H-226

Reinforcing other types of latex is done with Pliolite

The stoutest pipe vise .... with built-in folding legs and tray

RIDGID
Tristand Pipe Vise

RIDGID Tristand Pipe Vise, yoke model.

Chain model also available.

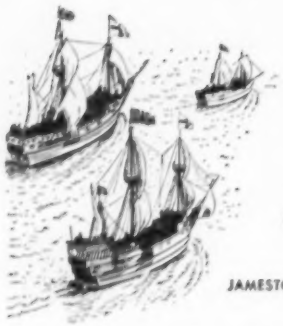
Extra easy to fold up, carry and set up... Extra strong, extra rigid in use

Most service and durability for your money! Integral legs and tray mean quick easy fold-up for carrying and set-up for work—provide solid stance, greater strength.

Vise base is roomy, has ceiling brace screw, pipe benders, slots for tools. Special LonGrip jaws grip tight without chewing up pipe. Save work —see it, try it, buy it at your Supply House.

The Ridge Tool Company, Elyria, Ohio, U.S.A.

RIDGID
Work-Saver Pipe Tools



Early Settlers

JAMESTOWN, VIRGINIA • 1607-1957

Founded in 1873, DIAMOND FINISH is the oldest — and largest — exclusive ring plant in America. This is important only because it assures you the benefits of an unequalled background of experience based on the most extensive line of Rings available.

1873 1957

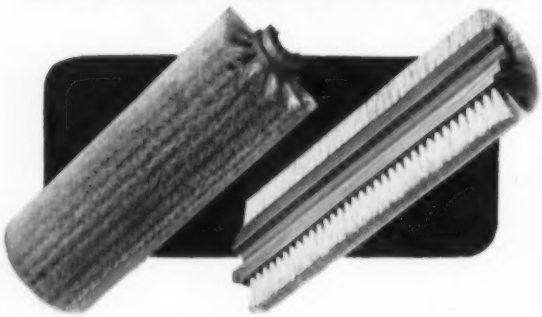
WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Rep. for the Carolinas & Va.: W. K. SHIRLEY, P.O. Box 406, Belmont, N. C.
For Ala., Ga., & Tenn.: P. C. EVERETT, 369 Meadowbrook Dr. NE, Atlanta

NOW! Cut Brush Costs with FELTON "Throw-away" Comber Cylinder Halfs



Felton machine made Comber Cylinder Brushes, either split or solid block style, are so low in cost you can now afford to throw away worn down refillable units. Replace with sturdily constructed Felton Brushes. Stocks on hand for all popular makes of combers. Try Felton on your next order.

S. A. Felton & Son Co.
MANCHESTER, N. H.

Felton

Send for complete catalog.

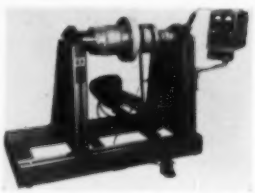
SOLD AND STOCKED BY **Schmidt Mfg. Co. of So. Carolina**
GREENVILLE, SOUTH CAROLINA

Latex 151, an aqueous dispersion of a styrene-butadiene copolymer. Not in itself film-forming, the new latex contains a tough, resin-like copolymer capable of bolstering hardness, stiffness, and modulus of styrene, nitrile, neoprene, and natural rubber latices. Adaptable to both cured and uncured formulations, it can be blended with most other rubber latices and subsequently compounded. It is useful in fabric coating and carpet backing compounds.

Goodyear Tire & Rubber Co., Chemical Division, Akron, Ohio

Do you want more data? Write supplier or use card on page 183; list H-227

Balancing machines which are used in four different ways to correct vibration and unbalance problems in motors, spindles, turbines, impellers, flywheels, blowers, etc., are built in three models: 101, 102, and 103. They are used (1) for dynamic and single plane balancing, (2) to check vibration tolerances of assembled machinery, (3) to pinpoint the causes and analyze all frequencies of vibrations in assembled machinery, and (4) for "in-place" or portable balancing.



International Research & Development Corp., Columbus, Ohio

Do you want more data? Write supplier or use card on page 183; list H-228

A bright reddish shade of blue is obtained from the dyestuff Procion Brilliant Blue R. Its very good fastness to light and washing on cellulosics is maintained even in pale depths of shade. The self shade is particularly desirable for multicolor patterns in textile printing and in white or illuminated resist styles.

Arnold, Hoffman & Co., Inc., 55 Canal St., Providence 1, R. I.

Do you want more data? Write supplier or use card on page 183; list H-229

New books

The 1957 *Directory of German Machinery and Equipment Manufacturers* is an 800-page English-language directory featuring complete listings of 20,000 manufacturers of all types of machinery, precision instruments and industrial equipment, classified in 9000 product categories. Available from the Nordman Publishing Co., Inc., 14 East 62nd St., New York 21, N. Y. Price: $3.50.

Compiled by the Corn Industries Research Foundation, Inc., *Critical Data Tables* is the most complete compilation to date of tables, charts, graphs, and similar information pertaining to processes and products of the corn refining industry, and is offered to the public at cost. The book contains sections devoted to important physical properties of products from corn and related products, including corn syrup, corn sugar, dextrose and sucrose, starch and dextrin, vegetable oils, grains and feeds. Detailed statistical treatment is given to such subject headings as analysis, boiling points, freezing points, moisture equilibrium, refractive indices, viscosities, specific heats, densities, optical rotations, flash and fire points, and solubilities. Available from the Corn Industries Research Foundation office at 1001 Connecticut Ave. NW, Washington 6, D. C. Price: $4.00, postpaid.

The Industrial Chemistry, Properties, and Application of Silicones, an Edgar Marburg lecture, was presented at the 1956 annual meeting of the American Society for Testing Materials. Copies of the lecture may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price: $1.50 each.

TI'S INFORMATION CENTER

BOOKLETS
NEW EQUIPMENT
ADVERTISEMENTS

Use this opportunity to keep abreast of new information dealing with machinery, equipment, supplies and services available to your mill.
To obtain more information on advertisements, print the name of the advertiser in the space provided on the card below.
Free booklets and more information on new equipment items may be had by entering their key numbers in the space designated for this use.
This service is made possible by the advertisers of TEXTILE INDUSTRIES as an aid to mill men who want to keep well informed on new developments in the industry. We cannot, however, extend this service to you unless you print or write legibly your name and position, the name of your firm, and its address on the card.
Four cards are provided in case others in your plant would like information . . . and TEXTILE INDUSTRIES pays the postman!

AUGUST, 1957

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....
.....
.....

Please send more information on advertisements (give Company Name)
.....
.....

Name ..... Position .....
Company Name .....
Address .....
City ..... State .....

AUGUST, 1957

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....
.....
.....

Please send more information on advertisements (give Company Name)
.....
.....

Name ..... Position .....
Company Name .....
Address .....
City ..... State .....

AUGUST, 1957

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....
.....
.....

Please send more information on advertisements (give Company Name)
.....
.....

Name ..... Position .....
Company Name .....
Address .....
City ..... State .....

AUGUST, 1957

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....
.....
.....

Please send more information on advertisements (give Company Name)
.....
.....

Name ..... Position .....
Company Name .....
Address .....
City ..... State .....

INDUSTRIES...FILL IN AS DIRECTED AND DROP IN MAIL BOX!

POSTAGE WILL BE PAID BY TEXTILE

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 8, GA.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 8, GA.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 8, GA.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 8, GA.

HELPFUL BOOKLETS FREE!

8-1 PLIOLITE LATEX. Details about uses for this versatile latex and other resin and rubber latices. Goodyear, Chemical Div., Akron 16, Ohio.

8-2 BUSINESS SITES AND PROFIT OPPORTUNITIES. Details on Georgia sites and profit opportunities, in strict confidence. Mr. Scott Candler, Secretary of Commerce, Ga. Dept. of Commerce, 100 State Capitol, Dept. LD67, Atlanta 3, Georgia.

8-3 HYDRAULIC SLASHER DRIVES. Bulletin 55-71 gives further information about Vickers Hydraulics on slasher drives. Vickers, Inc., Machinery Hydraulics Div., Administrative & Engineering Center, Dept. 1554, Detroit 32, Michigan.

8-4 UNIVERSAL CARD COILER. Folder gives complete specifications. McDonough Power Equipment, Inc., Machine & Foundry Div., McDonough, Georgia.

8-5 AJUSTO-SPEED DRIVES. Illustrated literature describes these new stationary field drives. Eaton Mfg. Co., Dynamatic Div., 3307 14th Ave., Kenosha, Wisconsin.

8-6 SPINNING FRAME MOTORS. Keep yarn moving on the newest spinning frames. Bulletin 51S8336, Allis-Chalmers, General Products Div., Milwaukee 1, Wisconsin.

8-7 VANEAXIAL FAN. Bulletin 3533 gives full details and performance chart on this fan. Buffalo Forge Company, Buffalo, New York.

8-8 RESLOOM E-50. Technical bulletin and experimental samples of this cyclic urea resin. Monsanto Chemical Co., Plastics Div., Room 1888, Springfield 2, Mass.

8-9 OVER 1,000 CHEMICALS. Booklet lists the many chemicals available from Harshaw. Harshaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

8-10 STAINLESS STEEL. Booklet gives full color report on stainless steel in textile manufacturing today. Allegheny Ludlum Steel Corp., Oliver Bldg., Pittsburgh 22, Pa.

8-11 DYE CONTROL SYSTEMS. Data Sheets on Control for your type of dyeing operation. The Foxboro Company, 487 Neponset Ave., Foxboro, Mass.

8-12 PILLOW BLOCKS. Catalog PBC gives complete details on the (New) Departure in Pillow Blocks. New Departure, Division of General Motors, Bristol, Conn.

8-13 SPIN-MASTER BOBBIN HOLDER! Write for further information on this uniquely designed all-new Bendix Spin-Master. Eclipse Machine Div., Bendix Aviation Corp., Elmira, New York.

8-14 SHIPPER ROD SWITCH. For complete information on the lint tight, compact, versatile shipper rod switch, write to Cutler-Hammer, Inc., 1456 St. Paul Ave., Milwaukee 1, Wis.

8-15 BEAMS. How to save an entire operation, production space, and machinery investment with Celanese's beams. Celanese Corp. of America, Textile Division, Box 1414, Charlotte, N. C.

8-16 "MERROW CLASS M. MACHINES". Booklet illustrates advanced engineering features, provides application information. The Merrow Machine Co., 2805 Laurel St., Hartford, Conn.

8-17 EVER-READY WATER SUPPLY. Booklet entitled "Tank Talks" describes tanks you can depend on for fire protection and general needs. R. D. Cole Manufacturing Co., Newnan, Ga.

8-18 M&W TENTERETTES. Write for details on a small tenter for your special needs. Marshall and Williams Corporation, Providence, R. I.

8-19 SEALOL ROTARY JOINTS. Write now . . . for Bulletin 14 . . . for complete data! Sealol Corp., 221 Post Road, Providence 5, R. I.

8-20 DOFFER'S BOX. Complete details upon request on Lane Style 20 Doffer's Box. W. T. Lane & Bros., Inc., Poughkeepsie, N. Y.

8-21 SOLVENT CLEANER. Further details on Oakite 117, a solvent cleaner just perfect for textile mills. Oakite Products, Inc., 26C Rector St., New York 6, N. Y.

8-22 JOHNSON JOINT. Write for facts on this Series 3000 Johnson Joint and the syphon elbow. The Johnson Corporation, 815 Wood St., Three Rivers, Michigan.

8-23 NEW BOBBIN MANUAL. Only complete, authoritative bobbin guide in the industry. Write direct to Dept. DD, Lestershire Spool Division, National Vulcanized Fibre Co., Wilmington 99, Delaware.

8-24 "CONIFLEX." For complete information and quotation on straight bevel "Coniflex" gear generators write Ferguson Gear Company, P. O. Box 511, Gastonia, N. C.

8-25 CAUSTIC SODA. Get full details, today . . . ask for newest booklet "74% or 50% . . . . Which for You?". Section TI, Wyandotte Chemicals Corp., Wyandotte, Michigan.

8-26 WHITIN PACEMAKER TWISTERS. Write today for our folder giving detailed information. Whitin Machine Works, Whitinsville, Mass.

8-27 GENACRYL DYES FOR ORLON. Further information about color-matching formulations and application methods. General Dyestuff Co., General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y.

8-28 CHELATION. New brochure "Keys to Chelation" available from The Dow Chemical Company, Midland, Michigan, Dept. CA 1313C.

8-29 HYCAR LATEX. Hycar-treated denims are colorfast. For further information write Dept. HF-4, B. F. Goodrich Chemical Co., 3135 Euclid Ave., Cleveland 15, Ohio.

8-30 NAPPER. Monforts high speed RZ Napper automatically maintains Pre-Set Napping effect at any speed. Cocker Machine and Foundry Co., Gastonia, N. C.

HELPFUL BOOKLETS FREE!

OPENING THROUGH ROVING

R-1 Lummus Pepper-Shaker Opener —Gives complete details and photographs Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-2 Static Elimination — How to eliminate static safely and inexpensively. Simco Co., 920 Walnut St., Lansdale, Pa.

R-3 Card Grinding Information — Care and operation of cards. B. S. Roy & Son Co., Worcester, Mass.

R-4 Card Clothing — Describes Strip-O-Matic Card Clothing. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia, Pa.

R-5 Versa-Matic Drawing Frame — Describes drafting elements, quality of sliver, roving and yarn possible. Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

R-6 Sargent Opener—Describes opener with rotary evener and stripper. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-7 Ball Bearing Comb Boxes — Describes working principle, shows cut-away Views, Southern States Equipment Corp., Hampton, Georgia.

R-8 Feathertouch Drafting — Describes "highest production per frame at lowest cost." Ideal Industries, Inc., Bessemer City, N. C.

R-9 Automatic Weighing Feeders — Tandem Weighing Feeder produces webs, mats and felts of continuing accuracy. W. D. Dodenhoff Co., Inc., Box 178, Greenville, S. C.

R-11 Flexidyne Individual Card Drive—Describes operating principles, includes prices. Dodge Mfg. Co., Mishawaka, Indiana.

R-13 Tips On Carding Procedure — Very helpful monthly bulletin concerns card operation and care. Ashworth Brothers, Fall River, Mass.

R-14 Pneumastop For Fly Frames—Brochure shows type of installation and method of operation. Pneumafil Corp., Charlotte 8, N. C.

R-15 Advantages of Aldrich Pickers —Good technical text, comprehensive pictures. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-16 Universal Card Coiler—Gives 12 reasons why it's "the best," includes dimensions. McDonough Power Equipment, Inc., McDonough, Ga.

R-17 New Condenser Tape — Describes Supr-o-O-Tape an impregnated fabric condenser tape. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

R-18 Coilers and Conversions — Describes new complete coilers and conversions for cards. Southern States Equipment Corp., Hampton, Ga.

R-19 84" Woolen Card — Includes picture, floor plan, description, and technical details. Davis & Furber Machine Co., North Andover, Mass.

SPINNING—TWISTING—WINDING—SPOOLING—WARPING—THROWING

R-101 Spinning News — Up-to-the minute news on spinning equipment. Roberts Co., Sanford, N. C.

R-102 Plastic Bobbins — Improved quality and efficiency in production described. Engineered Plastics, Inc., Gibsonville, N. C.

R-103 Products For Spinning and Weaving—Complete line, applications, advantages shown. Dayton Rubber Co., Textile Div., Dayton, Ohio.

R-105 Spindle Oil — "Gulfspin" insures against excessive wear and eliminates spindle wobble. Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

R-107 Tru-Draft Creels — Complete details on Tru-Draft Umbrella Creel. The Bouligny Co., P. O. Box 2115, Charlotte, N. C.

R-108 High Speed Automatic Quiller —Lists advantages and dimensions of "Autocopser." Terrell Machine Co., Inc., P. O. Box 928, Charlotte, N. C.

R-109 Motor Control—Uses and advantages of control for roving and spinning frames. Cutler-Hammer, Inc., Milwaukee, Wis.

R-110 Stop Frame On Roving Failure—Adamstop instantly detects roving failures, stops frame. Adams, Inc., 209 East Stone Ave., Greenville, S. C.

R-111 Automatic Cop Winder—Tells how high production with less labor is possible. F. A. Lazenby Co. 3106 Elm Ave., Baltimore 11, Md.

R-112 Bahnson Packaged Modernization—Details on Collecto-Vac, Open-Aire Creels, Cross-Jet Cleaner, Air Conditioning. Bahnson Company, Winston-Salem, N. C.

R-113 Sectional Warper — Describes full width and sectional warpers for knitting, weaving. Robert Reiner, Inc., Weehawken, New Jersey.

R-114 Conical Rings and Flyers — Complete details and specifications. Herr Manufacturing Co., Inc., 318 Franklin St., Buffalo 2, New York.

R-115 Precise Winding Machine — For winding pineapple or straight cones and tubes of synthetics. Foster Machine Co., Westfield, Mass.

R-116 Automatic Cleaning Equipment—Working details and advantages of the Tri-Rail Cleaner. American Monorail Co., 13107 Athens Ave., Cleveland 7, Ohio.

R-117 Aluminum Section Beams — Lists advantages, includes prices and delivery schedules. Hayes Industries, Inc., Jackson, Mich.

R-118 Lubricants For Textiles — Samples of Ben Boy Bearing, Spindle, Twister Lubricants and Non-Melting Oils. Georgia-Carolina Oil Co., Box 101, Macon, Ga.

R-119 Custom Made Thread Guides—Includes composition, properties, specifications of all designs. American Lava Corporation Chattanooga 5, Tenn.

R-120 Spinning Frame Conversions—Big-package, new-frame results at half the cost. Meadows Mfg. Co., Station A., Atlanta, Ga.

R-121 Collecto-Vac — New development collects lint, fly and broken ends. The Bahnson Company, Winston-Salem, N. C.

R-122 Static Eliminator For Warpers-Slashers-Creels—Increased production, improved quality, reduced waste. The Portland Co., 22 Fore St., Portland, Maine.

R-123 Spinning and Twister Rings — Complete details, pictures, price lists. Whitinsville Spinning Ring Co., Whitinsville, Mass.

R-124 Double Deck Twisters—High speed twisting of silk, rayon, nylon to finest deniers. U. S. Textile Machine Co., Scranton 8, Pa.

R-125 Lint-Free Creel—Complete details and pictures of the new Airfoil Design. Pneumafil Corporation, Charlotte 8, N. C.

R-126 Gear Bulletins — Cover products and gears for the complete textile mill. Precision Gear & Machine Co., 2001 N. Tryon St., Charlotte 2, N. C.

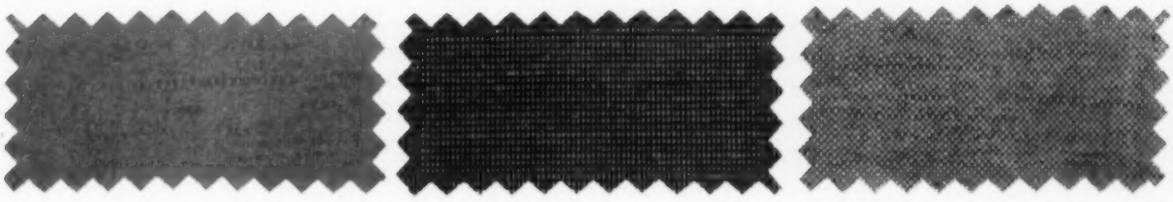
R-127 Headless Package Twister — Eliminates Redrawing—builds tapered or straight-end headless packages. U. S. Textile Machine Co., Scranton 8, Pa.

R-128 Suction Cleaning System—Details on new Collector Unit Model C-4. Pneumafil Corp., Charlotte 8, N. C.

R-129 Facts About Your Flyers and Spindles—Advantages of smooth flyer and spindle operation. Ideal Machine Shops Bessemer City, N. C.

(Continued Next Page)

From crisp classics to superb new basketweaves . . .



from shantung types to soft, textured homespuns

ARNEL SHARKSKIN is proving the best thing to hit spring and summer in years. Its dramatic, and mounting success at retail right now points irrefutably to an even bigger success in spring '58. Every converter and mill man knows that when a fabric ends a season selling stronger every day, it will be a real force the following year.

Arnel Triacetate is currently being used by more than 100 manufacturers. Leading fashion magazines and newspaper editors continue to give their signature of approval in a growing flood of editorials. There is no question but that Arnel sharkskins will be big profit volume runners for spring and summer 1958. For further information, contact Celanese Corporation of America, Textile Sales Division, Charlotte, North Carolina.

Celanese® Arnel®

DISTRICT SALES OFFICES 180 Madison Ave., New York 16, N. Y. — 819 Santee St., Los Angeles, California
P. O. Box 1414, Charlotte 1, N. C. — 200 Boylston St., Chestnut Hill 67, Mass.
Room 10-141 Merchandise Mart, Chicago 54, Illinois

EXPORT Amcel Co., Inc. and Pan Amcel Co., Inc., 180 Madison Ave., New York 16, N. Y.

IN CANADA Chemcell, Canadian, Chemical & Cellulose Co., Ltd., 2035 Guy St., Montreal

ARNEL TRIACETATE A Celanese CONTEMPORARY FIBER

This is the official Arnel symbol—evidence that this fabric of this new triacetate fiber has been pre-tested for performance claimed.

HELPFUL BOOKLETS FREE!

R-130 Twisting Machinery—Information on novelty yarn twisters. Collins Brothers Machine Co., 647 Roosevelt Ave., Pawtucket, R. I.

R-132 Traveling Cleaners—Describes improved frame and room cleaners. Parks-Cramer Co., Fitchburg, Mass.

R-133 Lapless Endless Spinner—Full information available. Ton Tex Corporation, 31 Columbus Ave., Englewood, N. J.

R-134 Textile Metal Products — Describes spinning and twisting cylinders, card screens. ,Jenkins Metal Shops, Inc., Gastonia, N. C.

R-135 Worsted Spinning — Describes five stages from top to yarn. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

R-138 Warper Beams — High speed beams for rayon tire cord and cotton. U. S. Bobbin & Shuttle Co., Lawrence, Mass.

R-139 Spindle Oiling Machine—Features and advantages noted. Wicaco Machine Corp., 4800 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

R-141 Handy Spinning Reference — Shows traveler speeds, sizes of ring flanges. Victor Ring Traveler Co., Providence, R. I. and Gastonia, N. C.

R-142 Unirail Uptwister — Higher yarn quality and better packages at faster speeds. Universal Winding Co., P. O. Box 1605, Providence, R. I.

R-143 Vacuum Scavenger System — Application to drawing, roving and spinning processes, Spinsavac Corporation, 1438 South Tryon St., Charlotte, N. C.

R-144 Precision Textile Winding — Tensions and Density Control for winding rubber cones. Kidde Mfg. Co., 35 Farrand St., Bloomfield, N. J.

R-145 Roller Bearing Spindles — Pictured in cut-away views, advantages described. The Marquette Metal Products Co., 1145 Glenwood Ave., Cleveland, Ohio.

R-146 Cone Winder—Describes Model 102 winder, including applications. Foster Machine Co., Westfield, Mass.

R-147 Short Cut To Staple Fiber Spinning—Ten steps in operation of the Tow Stapler. Turbo Machine Co., Lansdale, Pa.

R-148 Weaver's Knotter — Instructions as to use, description. A. B. Carter, Inc., Gastonia, N. C.

R-149 Textile Roll Coverings — Describes complete line as well as other mill supplies. Armstrong Cork Co., Industrial Div., Lancaster, Pa.

R-150 Lint-Free Motor — Describes motor for constant speed a-c driven pickers, roving frames, spinning and twisting frames, etc. Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.

R-151 Tape For Driving Spindles — Describes banding for spindle drives on twisting, roving and spinning. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

R-152 Giant Aluminum Cotton Beams —Describes 38 x 54" section beams for cotton. Hayes Industries, Inc., Jackson, Mich.

R-153 Woolen Spinning Frame — Colored picture, complete details Davis & Furber Machine Co., North Andover, Mass.

SLASHING—WEAVING—CLOTH ROOM—TUFTING

R-201 Looms — Describes "World's Largest Line of Looms." Crompton & Knowles Loom Works, Worcester 1 Mass.

R-202 Counting And Measuring Devices—Wide range of counting devices for all types of textile machinery. Veeder-Root, Inc., Hartford, Conn.

R-203 Loom Supplies — Describes complete line. E. H. Jacobs Northern Division, The Bullard Clark Co., Danielson, Conn.

R-204 Innovation In Textile Drying—Details on Steam or Gas "Hot Air" Slasher. J. O. Ross Engineering Corp., 444 Madison Ave., New York 22, New York.

R-205 Slashing Hints—Covers complete slashing operation. Seydel-Woolley & Co., 748 Rice St., N.W., Atlanta, Ga.

R-206 Loom Production Charts — Celluloid card shows yards per loom per week. Ralph E. Loper Co., Greenville, S. C.

R-207 Aluminum Beams—Describes lightweight beams for textiles, Hayes Industries, Inc., Jackson, Mich.

R-208 The Story Of Starches — History and information on manufacture and use of starches. National Starch Products, Inc., 270 Madison Avenue, New York 16, N. Y.

R-209 Loading System — Pneumatic loading system for Saco-Lowell slasher. The Foxboro Company, Foxboro, Mass.

R-211 Steel Warp Beams—Beams for both broadloom and narrow fabrics. Milton Machine Works, Inc., Milton, Pa.

R-212 Penford Gums In Textiles — Describes excellent properties for warp sizing spun yarns. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

R-213 Saco-Lowell Positrol Slasher—Includes advantages, photographs, cutaway drawings. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

R-214 Rotary Unions—Cut costs, get better sealing on can dryers. Perfecting Service Company, 332 Atando Ave., Charlotte, N. C.

R-215 Hot Air Slasher — Describes advantages and capacities, includes specifications. West Point Foundry & Machine Co., West Point, Ga.

R-216 Air Slasher Dryer — Shows construction and operating details. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

R-217 Butt-Tacking Sewing Machine —Describes operation, installation of single thread butt-tacking sewing machine. The Merrow Machine Co., 28 Laurel St., Hartford, Conn.

R-218 Loom Reed Booklet — Describes in detail a variety of reeds. Steel Heddle Mfg. Co., 2100 West Allegheny Ave., Philadelphia 32, Pa.

R-219 Cocker Equipment—Information on warp sizer, beam warper, creels, tensions, back-winders, etc. Cocker Machine & Foundry Co., Gastonia, N. C.

R-220 Chemical Data Sheets—Available on a full range of chemicals. Nopco Chemical Co., Harrison, N. J.

R-221 Aligning Lays—Setting instructions for step-by-step aligning. Draper Corporation, Hopedale, Mass.

R-222 Baling Presses — Complete line of balers for all materials. Economy Baler Co., Ann Arbor, Mich.

R-223 Tufting Machines — Describes automatic pattern attachment. Cobble Bros. Machinery Co., Inc., River Road, Chattanooga, Tenn.

R-224 Amco Heliclone Loom Cleaner—Tells how to eliminate the job of cleaning looms manually. American Moistening Co., Providence, R. I.

R-225 Hermas Textile Machines — Information on Unwind Stand, Automatic Guiding Unit, Jet Mixer, Selvage Trimming, etc. Hermas Machine Co., Hawthorne, N. J.

R-226 Prevent Fabric Distortion — How to eliminate distortion and where to check for it. Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.

(Continued Next Page)

DENMAN PIONEER DROP BOX REVERSIBLE PICKER

DENMAN PIONEER LUG STRAP

DENMAN PIONEER SWEEPSTICK

DENMAN PIONEER HOLD-UP STRAP

DENMAN PIONEER SPINDLE ROD BUMPER

DENMAN PIONEER DOLL PICKER

DENMAN PIONEER BOBBIN STRIPPER BLADE

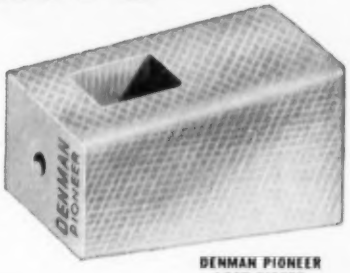
SPECIFY THE ORIGINAL

Denman

PIONEER LOOM PARTS

Compounded For Smooth, Dependable Performance . . .

Longer Life And Greater Resistance To Shock!



DENMAN PIONEER LOOP PICKER

For more than 20 years Original Denman Pioneer Loom Parts have set new standards for smooth, dependable performance. They are scientifically designed and moulded to absorb repeated loom shocks with little or no adjustment . . . need replacement only after longer-than-average service. To cut costs, step up production, specify Original Denman Pioneer Loom Parts . . . they are built for rugged use and a longer "prime of life"!

Ask The DENMAN Sales Agent Nearest You . . .

R. E. L. HOLT, JR. & ASSOCIATES, INC. Drawer 1319, Greensboro, N.C.

JOHN P. NORMAN, P.O. Box 445, West Point, Ga.

DAVE SELLARS, Drawer 1319, Greensboro, N.C.

THE KARL H. INDERFURTH CO., INC. *(Exclusive Selling Agent and Warehouse)* P.O. Box 6161, Charlotte, N.C.

TEXPLANT CORPORATION, 695 Summer Street, Stamford, Conn.

ALBERT R. BREEN 80 E. Jackson Blvd., Chicago 4, Ill.

R. D. HUGHES COMPANY 9425 Garland Road, Dallas, Texas

Other Representatives Throughout the World . . . Or Write

DENMAN TEXTILE RUBBER COMPANY

2828 Second Street • Cuyahoga Falls, Ohio

NEW YORK • PHILADELPHIA • CHARLOTTE, N.C. •

HELPFUL BOOKLETS FREE!

R-227 Formulas For Slashing Arnel —Includes also information on warping, weaving and quilling. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte 1, N. C.

R-228 The Random Web Process — Describes the Rando-Webber and Rando-Feeder. Bulletin 104. Curlator Corp., Textile Div., 501 W. Commercial St., Rochester, N. Y.

R-229 Quickclean Textile Motor — Details on totally enclosed fan cooled lint-free motor. Allis-Chalmers Mfg. Co., 1126 So. 70th St., Milwaukee, Wis.

R-232 Hydraulic Slasher Drives — Describes economical approach to improved slasher operation. Vickers, Inc., 1036 Peachtree St., Atlanta, Ga.

R-233 Textile Accessories — Gives specifications of Gates textile accessories in handy pocket booklet. The Gates Rubber Co., 1001 Broadway, Denver 17, Colorado.

R-234 Cocker Slashers — Complete specifications and advantages, including allied equipment. Cocker Machine & Foundry Co., Gastonia, N. C.

R-235 Mounts For Looms — Vinyl mount eliminates need for bolts or paste. Clark, Cutler, McDermott Co., 106 W. Central St., Franklin, Mass.

R-236 Unifil Loom Winder — Describes new concept of filling preparation which needs no quilling area. Universal Winding Co., P. O. Box 1605, Providence, R. I.

R-237 High Speed Warp Sizer—Gives outstanding features and specifications. Cocker Machine & Foundry Co., Gastonia, N. C.

R-238 Traveling Loom Cleaner—Advantages of the new Oscillaire loom cleaner. Parks-Cramer Co., Fitchburg, Mass.

R-239 Draper Repair Parts Catalog —Contains illustrations covering all mechanisms and construction with complete listings. Draper Corporation, Hopedale, Mass.

R-240 Baling Presses — Describes complete line of motor-driven and hydraulic baling presses. Logemann Brothers Co., 3150 West Burleigh St., Milwaukee, Wis.

R-241 Textile Machinery Parts Catalog — Describes complete line of Dayco and Thorobred textile parts. Dayton Rubber Co., Dayton, Ohio.

R-242 Instruments For Accuracy. — Systems for sizing and slashing. Bulletin 98229, Taylor Instrument Co., Rochester, N. Y.

R-243 Counting Devices — Describes complete line of counters for every application. Trumeter Company, 1265 Broadway, New York 1, New York.

R-244 Squirrel-Cage Loom Motor — Describes totally enclosed, non-ventilated, constant-speed motors. Westinghouse Electric Co., P. O. Box 2278, Pittsburgh 30, Pa.

R-245 Static Bars — Humorously illustrates how static can be overcome. The Simco Co., 920 Walnut St., Lansdale, Pa.

R-246 Care Of Draper Shuttles — Describes how longer, troublefree service may be obtained. Draper Corporation, Hopedale, Mass.

R-247 Clutch Brake Motor For Draper Looms — Describes compact power package for driving Draper looms. Westinghouse Electric Corp., P. O. Box 2278, Pittsburgh 30, Pa.

KNITTING

R-301 Singlehead Full-Fashioned Machine — Literature on request from the Wildman Jacquard Mfg. Co., Full Fashioned Div., Norristown, Pa.

R-302 Forged Head Aluminum Beams — Gives specifications on new high yardage beams. Milton Machine Works, Inc., Milton, Pa.

R-303 Raschel Knitter — Describes new Raschel-type knitting machine. Kidde Manufacturing Co., Inc., 35 Farrand St., Bloomfield, N. J.

R-306 Booklets On Fidelity Machines — Details on "400", Multi-Design Ribber, Skein Reelers. Fidelity Machine Co., 3908-18 Frankford Ave., Philadelphia 24, Pa.

R-307 Needle Oil Does Not Stain — Details on "Gulftex 39" developed for knitting mills. Gulf Oil Corp., P. O. Box 1106, Pittsburgh 30, Pa.

DYEING—BLEACHING—FINISHING—PRINTING

R-401 Solvent Detergents — Capabilities and advantages noted. Oakite Products, Inc., 126C Rector St., New York, N. Y.

R-402 Tubes For Package Dyeing — Describes Dytex tubes for one-time use. Sonoco Products Co., Hartsville, S. C.

R-403 Finishing Machinery — Text and photographs of complete line of machinery. Marshall and Williams Corp., 46 Baker St., Providence, R. I.

R-404 Water Analysis — Includes tables, conversion factors, indicators, standard solutions. Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-405 Dyeing Equipment — Diagrams and descriptions of complete line. James Hunter Machine Co., North Adams, Mass.

R-408 Hydrogen Peroxide — Covers properties, uses and handling. Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-409 Nonionic Softener — Properties and test procedures for "Emersoft 7700." Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

R-412 Cationic Surface Active Agent — Describes Uversoft "D." Harshaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

R-413 Chemicals, Dyes And Intermediates — Complete file of bulletins available. Metro-Atlantic, Inc., Centredale, R. I.

R-414 Wetting Agent — Describes highly concentrated detergent and wetting agent. Rohm & Haas Co., Washington Square, Philadelphia, Pa.

R-415 Peroxide Bleaching System — Illustrates and describes this continuous system. E. I. du Pont de Nemours & Co., Electrochemical Dept. T.I-2, Wilmington, Del.

R-416 Surface Tension Depressant — Tells how product can be used for wetting, dye leveling or as a penetrant. Hart Products Corp., 1440 Broadway, New York, N. Y.

R-417 Textile Chemicals — Describes leading products for wet processers. Royce Chemical Co., Carlton Hill, N. J.

R-418 Industrial Water Treatment — Discusses fundamentals of industrial water treatment. Rohm & Haas Co., Resinous Products Div., Washington Square, Philadelphia 5, Pa.

R-419 Theoretical and Applied Silk Soaking — Outlines methods and gives suggestions. Hart Products Corp., 1440 Broadway, New York 18, New York.

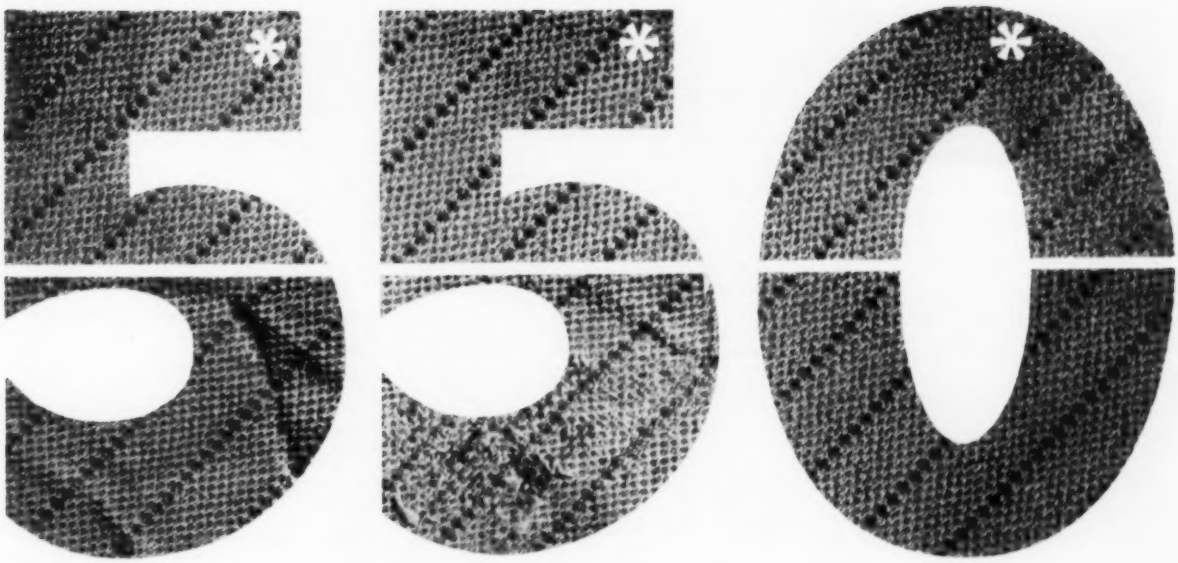
R-420 Brine For Textile Industry — Describes Lixate Process for making brine. International Salt Co., Inc., Scranton, Pa.

R-421 Depuma — Describes odorless, viscous, non-evaporating emulsion for anti-foam. American Aniline Products, Inc., 50 Union Square, New York, New York.

R-422 Catalyst AC-6 — Tells how curing efficiency may be stepped up as much as 25%. Monsanto Chemical Co., Plastic Division, Dept. T1-3, Springfield 2, Ohio.

R-423 Soda Ash Bulletin — Contains useful data covering this subject. Solvay Sales Division Allied Chemical & Dye Corp., 40 Rector St., New York 6, New York.

(Continued Next Page)



THE WICA REACTANT RESIN!

FIVE

Hangs-out five times better than untreated fabric . . . all for less than a fifth of the cost of lost buyers when the market demands full blown-up feel of reactant resin results.

FIVE

"Formidable" resistance is offered to surface abrasion . . . tensile strength, resiliency and hand is substantially increased . . . vitality of fabric is dramatically improved . . . each fibre is reinforced with penetration of WICA reactant resin 550 throughout.

ZERO

Dyed shades are effected negligibly . . . nothing impedes fabric's breathing with WICA resin 550 . . . voided orders are unheard of with alive, easy handling fabric treated with WICA reactant resin 550.

Wica

WICA CHEMICALS, INCORPORATED

OLD CONCORD ROAD • CHARLOTTE, NORTH CAROLINA

synthetic organic chemicals • textile specialties

latices • adhesives

SPECTRUM ACCURACY

We will treat a sample of your fabrics on request.

HELPFUL BOOKLETS FREE!

R-424 Water Repellent Finish — Describes Aquarol water repellent finish. Arkansas Co., Inc., Newark, N. J.

R-425 Wool Oil — Describes antistatic fiber lubricant, Twitchell 7421. Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

R-426 Industrial Oil — Catalogs on Industrial Oil and Fatty Acid products. Swift & Company, Industrial Oil Dept., 1800 165th St., Hammond, Indiana.

R-427 Resins & Latices — Describes applications and gives properties. Goodyear Chemical Div., 1144 East Market St., Akron 16, Ohio.

R-428 Chemical Catalog — Lists products with chemical composition, properties and applications. Antara Chemicals Div., General Aniline & Film Corp., 435 Hudson St., New York 14, New York.

R-429 Chemical Bulletins — Issued each month as a help to wet processers. WICA Chemicals, Inc., P. O. Box 506, Charlotte, N. C.

R-430 Hydraulic Power Units — Describes unit for operating hydraulic textile machines. B. F. Perkins & Son, Inc., Holyoke, Mass.

R-431 Proctor Drying Machinery — Describes all types of dryers, includes information on preboarding. Proctor & Schwartz., Inc., 7th and Tabor Rd., Philadelphia, Pa.

R-433 Safe Handling Of Hydrogen Peroxide — Lists safety rules to be followed in handling the product. Solvay Process Division, Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-435 Cut Water Treatment Costs — Describes the control of scale, slime, algae and corrosion. Oakite Products, Inc., 126C Rector St., New York 6, New York.

R-436 Rapidase For De-Sizing — The properties and characteristics of Rapidase in detail. Wallerstein Co., Inc., 180 Madison Avenue, New York 16, N. Y.

R-438 Surface-Active Agent — Properties, applications, of Nonionic Actylphenoxyethanol Triton. Rohm & Haas Co., Special Products Dept., Washington Square, Philadelphia, Pa.

R-439 Curing Oven — Details, pictures, and advantages of gas-fired oven. James Hunter Machine Co., North Adams, Mass.

R-440 Guiders And Tension Devices — Straight line guiding of open width goods. Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.

R-441 Processing Arnel Fabrics and Blends — Formulas for dyeing, printing, finishing and heat treating. Celanese Corp. of America, Textile Div., Marketing Dept., Box 1414, Charlotte, N. C.

R-442 Hycar Latices — Physical properties and typical fields of application. B. F. Goodrich Chemical Co., 324 Rose Bldg., Cleveland 15, Ohio.

R-443 Sodium Hydrosulfite — Literature and test samples are available on "T-C Hydro." Tennessee Corp., 617-629 Grant Bldg., Atlanta, Ga.

R-444 50% Or 74% Caustic — Chart helps decide most economical caustic for you. Wyandotte Chemical Corp., Dept. 565-T. Wyandotte, Mich.

R-445 New Finishing Rolls — Money-saving facts about long-wearing, quality rolls. The Dayton Rubber Co., Holfast Div., 1486 Lakewood Ave., Atlanta, Ga.

R-446 Ethanolamines — Lists application, chemical and physical properties. Nitrogen Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, New York.

R-447 Nappers For Treating Any Fabrics — Complete details on Muller Tri-Napping Machine. Franz Muller, Monchen-Gladbach, Germany.

R-448 Ball Bearing Turn Table — Describes 48-inch steel turn table for mills. Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

R-449 Rotary Dyeing Machine — For use in dyeing hosiery, hats, gloves, socks, etc. Smith, Drum & Co., Allegheny Ave., at 5th St., Philadelphia 33, Pa.

R-452 Micro Switch For Wet Process — Advantages and applications in dyeing, bleaching, finishing. Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, Ill.

R-453 Complete Line Of Mathieson Chemicals — Covers organic, inorganic, specialty chemicals. Olin Mathieson Chemical Co., Industrial Chemicals Div., Baltimore 3, Md.

R-456 Dyeing and Finishing Machinery — Complete line presented in series of catalogs. Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

R-457 Dyeing, Bleaching and Drying Equipment — Complete line for cotton, wool and synthetics described. Color pictures. Morton Machine Works, 1718 3rd Ave., Columbus, Ga.

R-458 Napthol Ratios Slide Chart — Quickly and accurately enables operators to determine Napthol Ratios. Alliance Color & Chemical Co., 33 Ave. P, Newark 5, New Jersey.

R-459 "PCB" Rock Salt — Tells how product saves money, eliminates bad dyeing. Morton Salt Co., Industrial Division, 120 So. LaSalle St., Chicago 3, Ill.

R-461 Wool Oils — Describes influence of wool oils in producing quality yarns and fabrics. Procter & Gamble Dist. Co., Gwynne Bldg., Cincinnati, Ohio.

R-462 Bleaching With Peroxygen Chemicals — Bleaching methods comprehensively treated. Becco Chemical Div., Food Machinery & Chemical Corp., Station B, Buffalo 7, New York.

R-464 Automatic Control System For Continuous Bleaching — How to control temperature, pressure and liquid level. Taylor Instrument Companies, Rochester 1, New York.

R-466 Penford Finishing Gums — Complete data, including physical properties. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

R-467 Regeneration Of Zeolite Water Softeners — Explains advantages of Lixate Process. International Salt Co., Scranton, Pennsylvania.

R-468 Dyeing Synthetic Fibers—Detailed analysis of methods and materials. General Dyestuff Co., 435 Hudson St., New York 14, New York.

R-469 Single Apron Stock Dryers — Presents latest idea in automatic drying. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-470 Eliminate Dye-Bath Shock — How to protect fabrics from crow's-feet, uneven shades. Foxboro Company, 487 Neponset Ave., Foxboro, Mass.

R-471 Continuous Peroxide Bleaching Ranges—Illustrations, description and specification of ranges. Rodney Hunt Machine Co., 49 Mill St., Orange, Mass.

R-474 Industrial Brushes — Features use on shears, printing machines. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

R-475 Waste Heat Recovery — Describes system of waste heat recovery from polluted water. Ludell Mfg. Company, 5200 West State Street, Milwaukee, Wis.

R-476 Washers For Scouring, Bleaching, Acidifying — Describes high-capacity, continuous process washers. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-478 Wool Cleaning Unit—Describes unit for cleaning carpet wools mechanically before scouring. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

FIBERS AND YARNS

R-501 Textile Research—Story of the Research Department. American Viscose Corp., 350 Fifth Avenue, New York 1, N. Y.

(Continued Next Page)

To manufacturers, converters, cutters, wholesalers and retailers:

LET'S GET THE FACTS STRAIGHT ABOUT MODERN RAYON

Many of the newer synthetic fibers which rocketed to fame in a flurry of claims, a few years ago, have recently suffered a good deal of debunking in trade and consumer circles.

This is hurtful to all of us in the apparel and home furnishings fields. It throws a smoke screen of doubt over the technical improvements and consumer benefits of *every* fiber—including rayon, the world's oldest, most used and *most improved* man-made fiber.

1957 Avisco rayon is not the rayon we all knew in 1945, in 1950—even in 1955. Intensified laboratory research has greatly improved it both in *structure* and in *use*.

It is stronger and vastly more versatile.

It can be kitten-soft in sterile surgical dressings or tiger-tough in tires beneath a truckload of crushed rock.

By itself, rayon can be silky, woolly, cottony or linen-like. In blends, it contributes its unique ability to take and hold gorgeous colors, absorb perspiration, and cut and drape and shape and stitch without seam slippage.

Improper *use* of rayon is swiftly disappearing. Remarkable new finishes, applied properly, add greatly to its superb washability, colorfastness, luster and comfort. The Avisco Integrity Program sets the standards for proper processing to meet end use requirements, and makes it worthwhile for everyone in the trade to observe these standards.

Many important cutters are adding the Avisco® Integrity Tag to apparel and home furnishings made from qualified fabrics. Many retailers find that this added assurance of quality rayon sells more goods and *keeps* them sold.

AMERICAN VISCOSE CORPORATION, 350 Fifth Ave., New York 1, N. Y.

HELPFUL BOOKLETS FREE!

R-502 Fortisan-36, New Textile Fiber —Includes charts, diagrams, text, presents technical properties. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte, N. C.

R-503 Caprolan Nylon Heavy Yarns —Describes strength, long flex life and ready dyeability. Fiber Sales Dept., National Aniline Div., 261 Madison Ave., New York 16, N. Y.

R-506 Rayon—Mile By Mile—Details on how rayon is produced mile by mile, perfect inch by inch. Industrial Rayon Corp., 500 Fifth Avenue, New York 18, N. Y.

R-507 The Chemstrand Nylon Story—Describes the birth and growth of Chemstrand nylon. Chemstrand Corp., 350 Fifth Ave., New York 1, N. Y.

RESEARCH—TESTING—LABORATORY

R-601 Testing Instruments—Descriptions of 37 instruments for testing textiles. Custom Scientific Instruments, Inc., 541 Devon St., Kearney, N. J.

R-603 Shadograph Weighing Devices —Pictures and information on various types of scales. Exact Weight Scales Co., Columbus 8, Ohio.

R-604 Evenness Tester—Details on taking the guess out of quality control. Uster Corp., 2516 Wilkinson Blvd., Charlotte, N. C.

MANAGEMENT, PROCESS ENGINEERING CONSULTANTS, FACTORS

R-701 Factoring Service—Details on advantages of factoring, including information on general banking and pension plans. Trust Company of Georgia, Atlanta, Ga.

R-702 Beechcrafts At Work — Tells how Beechcraft executive airplanes can save time and money. Southern Airways Co., Atlanta Airport, Atlanta, Ga.

R-705 The Wonalancet Way — Deals with current problems in Textiles. Wonalancet Company, 128 Burke St., Nashua, N. H.

R-706 A Fair Day's Pay And In Return A Fair Day's Work — Outlines proper utilization of labor, material and equipment. American Associated Consultants, Inc., 250 Park Ave., New York, N. Y.

GENERAL PLANT OPERATION

R-802 Belt Lacing Equipment — Includes prices, specifications, etc. Clipper Belt Lacer Co., Grand Rapids, Michigan.

R-803 Window Washing Systems — Tramrail Equipment enables men to reach all windows. Cleveland Crane & Engineering Co., Tramrail Division, Wickliffe, Ohio.

R-804 Motor Selector—How to select A-C motors for specific application. Reliance Electric and Engineering Co., 1088 Ivanhoe Rd., Cleveland 10, Ohio.

R-805 Everything For Floor Care — Describes scrubbing, waxing, polishing and mopping equipment as well as waxes and sealers. Finnell Systems, Inc., Dept. TI, 1300 East St., Elkhart, Ind.

R-806 Rotary Pressure Joints—Details on self-lubricating, self-adjusting, self-aligning joints. The Johnson Corp., Three Rivers, Mich.

R-807 Servicing "One-Shot" Lubricators—Describes high capacity spring discharge piston pump lubricator. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-808 Reduce Vibration — Illustrates savings possible through installation of Unisorb. The Felters Co., 216 South St., Boston 11, Mass.

R-810 Stop Corrosion — Details on "Speed-Rex" paint for metal, wood and concrete. Truscon Laboratories, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

R-811 Cleaning Systems — Complete details on "Certified Climate and Cleaning Systems." Parks-Cramer Co., Fitchburg, Mass.

R-812 Mechanical Power Transmission — Includes drawings, dimension, weights, prices, application. Dodge Mfg. Corp., Mishawaka, Indiana.

R-814 Schaub "03" Deaerators—How a simplified principle and good engineering reduce prices. Fred H. Schaub Engineering Co., 2110 South Marshall Blvd., Chicago 23, Ill.

R-816 Leather Belting — Selection, installation, proper maintenance. Atlanta Belting Co., 508-510 Whitehall St., S. W., Atlanta, Ga.

R-817 One-Shot Lubricators—Details on pull-type semi-automatic lubricators. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-819 Steel And Tank Service — Explains importance of periodic inspection, maintenance. Steel and Tank Service Co., 118 West 24th St., Charlotte, N. C.

R-820 Floaxial Dial Scales — Explains mechanism and gives applications. Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

R-821 Modern Methods Of Textile Floor Maintenance — Complete details on taking care of mill floors. G. H. Tennant Co., 2530 N. Second St., Minneapolis 11, Minn.

R-822 Industrial Greases — Describes multi-purpose lithium soap industrial greases. Sinclair Refining Co., 600 Fifth Ave., New York, New York.

R-823 Roller Bearings For Textiles —How roller bearings are employed for more profitable textile production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-824 Cylinders And Boosters — Complete listing of "in stock" equipment including proce and description. Miller Fluid Power Co., 2040 N. Hawthorne, Melrose Park, Ill.

R-826 Maintenance Of Variable Speed Drivers — Illustrates simple program for keeping drives in top shape. Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

R-827 Textile Mill Motor Control — Describes combination starters for textile machines. Cutler-Hammer, 315 N. 12th St., Milwaukee, Wis.

R-828 Blower And Exhausters — Full description, including detailed drawings. Buffalo Forge Co., 490 Broadway, Buffalo 5, N. Y.

R-829 Paint Stripping Booklet — Explains simplified method of stripping paint. Oakite Products, Inc., 22 Thames St., New York 6, New York.

R-830 Air Filtration — Illustrates Auto-Airmat, a dry-type air filter. American Air Filter Co., Inc., 275 Central Ave., Louisville 8, Ky.

R-832 Drinking Fountains & Coolers —Description of all models, dimensions, illustrations. Halsey W. Taylor Co., Warren, Ohio.

R-833 Textile Leathers Catalog — Characteristics and advantages of "Tannate" leathers. J. E. Rhoads & Sons, 2100 W. Eleventh St., Wilmington, Del.

R-834 Catalog Of Needle Bearings — Design, application for five types of needle bearings. The Torrington Co., Torrington, Conn.

R-835 Textile Lubrication — Shows methods and means of lubricating all machinery. The Texas Co., 135 East 42nd St., New York 17, N. Y.

R-836 Metered Lubrication — Points up advantages of central lubrication systems. Bijur Lubricating Corp., Rochelle Park, N. J.

R-837 Service Procedure For Ball Bearings—Helpful manual shows how to increase life of ball bearings. New Departure Div., General Motors Corp., Bristol, Conn.

R-839 Lubrication Of Electric Motors —How to lubricate and clean ball and roller bearings. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.

(Continued Next Page)

John P. MAGUIRE & COMPANY INC.

ON JUDGMENT—

One cool judgment is worth a thousand hasty counsels. The thing to do is to supply light and not heat.

WOODROW WILSON, 1916

It is the function of the experienced factor not only to extend financial accommodation, but to fortify and support the judgment of his clients in matters of basic business policy.

JOHN P. MAGUIRE & COMPANY, INC.

FACTORS

370 Fourth Avenue, New York
Murray Hill 3-4141

ONLY BORNE HAS IT!

Identification
on All Synthetics—Blends

Plus **FUGITIVITY**
UNMATCHED
ON NYLON & WOOL!

The Amazing New

SOLUTINTS

SOLUTINTS are a series of fugitive tints that provide identification, lubrication, and improved processing of all natural and synthetic fibres. In addition to giving *maximum tinctorial strength* — SOLUTINTS combine controlled moisture retention with *improved scourability.*

Contact
BORNE CHEMICAL COMPANY, INC.
82 Years of Textile Know-How
Formerly BORNE, SCRYMSER COMPANY
Elizabeth, N. J. • Charlotte, N. C.

HELPFUL BOOKLETS FREE!

R-840 Ball Bearings For Textile Machinery — Bearings for all phases of textile processing. The Fafnir Bearing Co., New Britain, Conn.

R-841 Lubrication Of Bearings — Helpful list of do's and don'ts to prolong bearing life. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.

R-842 Textile Mill Cleaning Guide — Methods and means of proper cleaning and maintenance. Oakite Products, 52 Rector St., New York 6, New York.

R-843 For Static Elimination — Eliminates static safely, simply and inexpensively. Simco Co., 980 Walnut St. Lansdale, Pa.

R-845 Cut Costs With Moyno Pumps — Describes "progressing cavity" pumps for mercerizing and sizing. Bulletin 30-TI, Robbins & Myers, Inc., Springfield, Ohio.

R-847 Lubricants For Textiles — Working samples of bearing lubricants, spindle oils, etc. Georgia-Carolina Oil Co., Box 101, Macon, Ga.

R-848 Oil-Tight Pushbuttons. — Describes line of pushbutton units for textiles. Cutler-Hammer, Inc., Milwaukee, Wisconsin.

R-850 New Lubricated Plug Valves—Semi-steel and steel lubricated plug line. The William Powell Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.

R-851 "Tank Talk"—Shows various types of elevated steel tanks. R. D. Cole Manufacturing Co., Newnan, Ga.

R-852 Cotton Mill Equipment — Traces pictorially the steps in processing raw cotton into finished cloth. Westinghouse Electric Corp., 511 Wood St., Pittsburgh 30, Pa.

R-853 Micro Switch Bulletin—Catalog of products includes prices, applications, etc. Micro Switch Div., Minneapolis-Honeywell Regulator Co. Freeport, Ill.

R-854 Roller Bearings For Textiles—How roller bearings can help production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-855 Unit Heater — Data on the Herman Nelson horizontal and vertical units. American Air Filter Co., Inc., 215 Central Ave., Louisville, Ky.

R-856 Stainless Steel For Textiles—Applications and advantages of stainless textile equipment. Allegheny-Ludlum Steel Corp., Dept. TI-71, Oliver Bldg., Pittsburgh 22, Pa.

R-857 Floor Scrubber — Description and specification for Scrubber Vac. Finnell Systems, Inc., 1300 East St., Elkhart, Ind.

R-861 "Vari-Pitch" Sheave Bulletin —Control by means of pitch diameter adjustment described. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

R-863 Penetrating Wood Finish — Describes floor seals for textiles. E. I. Du Pont De Nemours & Co., Inc., Finishes Div., Wilmington, Del.

R-864 Certified Climate Air-Changer System — Describes use with direct humidification for partial or complete air conditioning, Parks-Cramer Co., Fitchburg, Mass.

R-868 Ridge Tool Prices—Capacities and weights included along with pictures. Ridge Tool Co., Elyria, Ohio.

R-869 Stainless Steel Fabrication — Information on ventilating and drying, slasher exhaust, and materials handling in stainless. Sims Metal Works, West Point, Ga.

R-871 Color Conditioning — How to put color to work for you. E. I. Du Pont De Nemours & Co., Inc., Finishes Div., Wilmington, Del.

R-872 Metal Conveyor Belts — Illustrates entire range of manufacture. Ashworth Bros., Inc., Metal Products Div., Fall River, Mass.

R-873 Rihco Humidifiers And Cooling Systems—Describes new atomizers to lessen air consumption in evaporative cooling systems. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-874 Dynac Brake Motors—Electrical braking of a-c motors-roving, spinning, knitting. Westinghouse Electric Corp., Pittsburgh, Pa.

R-875 Textile Applications For "Scotch" Tape—Some good ideas on using "Scotch." Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

MATERIALS HANDLING

R-901 Casters And Wheels—Casters and wheels for all applications. Darnell Corp., Ltd., 12000 Woodruff Ave., Downey, Calif.

R-902 Canvas Baskets — Complete line for textile use. W. T. Lane & Brothers, Poughkeepsie, N. Y.

R-903 Overhead Handling Equipment — Shows successful applications of monorail systems. American Monorail Co., 13106 Athens Ave., Cleveland 7, Ohio.

R-904 How To Test Corrugated Boxes —Offers comprehensive check-list for judging boxes. Hinde & Dauch, Sandusky, Ohio.

R-905 Conveyor Key Book—How to step-up production with modern conveying. Logan Co., 1115 Franklin St., Louisville, Ky.

R-906 How To Select A Lift Truck—Excellent means for price comparison between similar trucks. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-907 Corrugated Containers — Describes Multi-Unit and Bulk Container. Gaylord Container Corp., 111 N. 4th St., St. Louis 2, Mo.

R-909 Tramrail Engineering And Application — Data on how Tramrail Equipment can cut handling costs. Cleveland Tramrail Div., Cleveland Crane and Engineering Co., 1036 East 289th St., Wickliffe, Ohio.

R-910 How To Specify Packaging — Regulations on shipment, how to determine which package to use. Hinde & Dauch, Sandusky, Ohio.

R-911 New Lift Trucks—Shows latest trends in lift truck design. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-912 Materials Handling For Textiles—Shows how fibre trucks can increase efficiency, protect products. National Vulcanized Fibre Co., Wilmington 99, Del.

R-913 Continuous Power Conveyor—Complete information on Zig-Zag Conveyor. Richards-Wilcox Mfg. Co., Aurora, Ill.

R-914 Stresses On Overhead Tracks —Covers track peening, discusses stresses. Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.

R-915 Scientific Materials Handling —Describes various materials handling devices, includes pictures. Bennett Rose Co., Box 8, Roebuck, S. C.

R-916 Overhead Materials Handling —Treats twin fan ceiling cleaners and shock proof electrification as well. Louden Machinery Co., Fairfield, Iowa.

R-917 Little Packaging Library — Series of booklets covers the business of shipping in corrugated boxes. Hinde & Dauch, Sandusky, Ohio.

R-919 Improved Materials Handling —"Materials in Motion" describes use of fibre containers. National Vulcanized Fibre Co., 1056 Beech St., Wilmington, Del.

are you gambling dollar$ to $ave...

Don't risk profit with a tube unfit for the job!

There's a big difference between using *a makeshift* tube and using a SONOCO tube *made especially* for the job at hand. This could mean the difference between profit and loss.

SONOCO has the "know how" of tube design and production, the result of nearly 60 years of research and experience in the manufacture of all types of paper tubes for textiles. This is your assurance that SONOCO can furnish a tube to fulfill your special requirements.

SONOCO makes hundreds of different tubes designed to meet specific problems in winding, twisting, creeling and related operations. Why risk your profit? Get the *right* tube for the job—from SONOCO.

sonoco
"ROUND THE WORLD"
PAPER CARRIERS
REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

MAIN OFFICE — HARTSVILLE, S. C.

MYSTIC, CONN. • AKRON, IND. • LOWELL, MASS. • PHILLIPSBURG, N. J.
LONGVIEW, TEXAS • PHILADELPHIA, PA. • LOS ANGELES, CAL.
GRANBY, QUEBEC • BRANTFORD, ONT. • MEXICO, D. F.

Where dependable
SERVICE is a "MUST"
...it pays to use
DARNELL
CASTERS AND WHEELS

RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads.
RUST-PROOFED . . . by zinc plating. Darnell Casters give longer, care-free life.

LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water.
STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 36)

J. Harvey was promoted from assistant secretary to secretary and sales manager, and **J. W. Rich** to treasurer. **O. H. Hoerr** was named assistant treasurer.

Queen Print Works, Inc., Providence, R. I., announces that **Bruno Raffanti** has been promoted to plant superintendent, assuming a number of the responsibilities of **E. F. Mulally,** former assistant manager who resigned to join Glenlyon Print Works in Phillipsdale, R. I.

New superintendent of Philadelphia Penn Worsted Co., Inc., manufacturers of novelty yarns, is **William R. Kolbusz,** formerly with Rose Mills of Philadelphia. In charge of the sample department at the novelty yarn spinning company is **Elwood A. Bennett.**

Now assistant comptroller of Ponemah Mills, Taftville, Conn., is **C. Charles Smith,** previously with the Almardon Mills, Lonsdale, R. I.

Newly-elected executive vice-president of Sayles Finishing Plants, Inc., and Sayles Biltmore Bleacheries, Inc., Saylesville, R. I., is **Elliot Broadbent,** manager of the Glenlyon Print Works division, a position he will continue to hold in addition to his other duties. **Joseph P. Quinn,** manager of Sayles bleachery division, and **Cornelius J. Quinn,** sales manager, have also been elected vice-presidents of both companies. **Frank O. McShane,** manager of Sayles Biltmore (N. C.) Bleacheries, has been named vice-president of Sayles Biltmore.

Gaston Jennings has been appointed assistant general manager of Group No. 1 of the cotton and spun fibers division of J. P. Stevens & Co., Inc., comprised of the Monaghan plant in Greenville, S. C., and the Greer and Victor plants in Greer. Mr. Jennings has been active in procurement of cotton and synthetic yarns and fibers and in production planning in Greenville.

Recently appointed to the membership committee of the U. S. Chamber of Commerce for a year was **Paul K. McKenney, Jr.,** vice-president and comptroller of Swift Manufacturing Co., Columbus, Ga.

John Hepburn is now superintendent of dyeing at Kenyon (R. I.) Piece Dye Works, and at the same plant **Fred Kinch** is now chief chemist, succeeding James McGibbon who has resigned.

R. J. Cheatham, head of the cotton mechanical processing section of the Southern Utilization Research and Development division of the Agricultural Research Service, USDA, in New Orleans, La., has been presented with the Department of Agriculture Superior Service Award for his accomplishments in research work. Under Mr. Cheatham's leadership a number of new devices have been developed for use in the textile industry, including a cotton cutter, to prepare cotton fibers for use in explosives; the SRRL cotton opener

Mr. Cheatham

to facilitate cleaning of trashy cottons resulting from mechanical harvesting; the SRRL loom attachment for the weaving of extra dense cotton fabrics on standard looms; the SRRL slasher for more effective sizing of cotton warp, and the Retracto-Pin Card Stripper for continuous mechanical cleaning of the carding cylinder. Mr. Cheatham was cited for his leadership, organizational skill, creative scientific imagination, and exceptional initiative and judgment in directing a research program designed to maintain and extend cotton's position in present and new uses.

Elwin C. Penski, Catonsville, Md., first student to attend the Philadelphia Textile Institute under the four-year scholarship sponsored by the Shenandoah Valley Textile Executives Association, has completed his courses at PTI with an "A" average, and has been accepted for graduate work in chemistry at Massachusetts

Institute of Technology. * * * PTI has awarded honorary degrees to **John F. Bassill,** president American Enka Co., New York; **Everett L. Kent,** chairman of the board Kent Manufacturing Co., Clifton Heights, Pa.; **Russell C. Osborne,** president, R. C. Osborne & Co., Philadelphia, Pa.; **Percival Theel,** coordinator of research, PTI; and **Sherwood R. Mercer,** dean Philadelphia College of Osteopathy, Philadelphia, Pa. * * * **Walter F. Prien,** Drexel Hill, Pa., has been appointed to the faculty of PTI as an associate professor in the microscopy and testing department. Mr. Prien was recently retired from the U. S. Navy with the rank of captain. * * * At the spring meeting of the New York Alumni Club of PTI, the following officers were elected: president, **John K. Klauber;** 1st vice-president, **Roy Reubel;** 2nd vice-president, **Richard S. Lembeck;** treasurer, **Eugene C. Batkin;** recording secretary, **Anthony L. Cartagine;** corresponding secretary, **George A. Jeandros.**

The Philadelphia, Pa., branch of LaFrance Industries is now being managed by **Bob Randall,** formerly production manager of the Anderson, S. C., plant.

W. R. Cooke has been appointed manager of the Barbour Mill of The Linen Thread Co., Inc., Paterson, N. J. Mr. Cooke was formerly in charge of selecting, grading, and quality control of flax, hemp, and other basic raw materials used in all the plants.

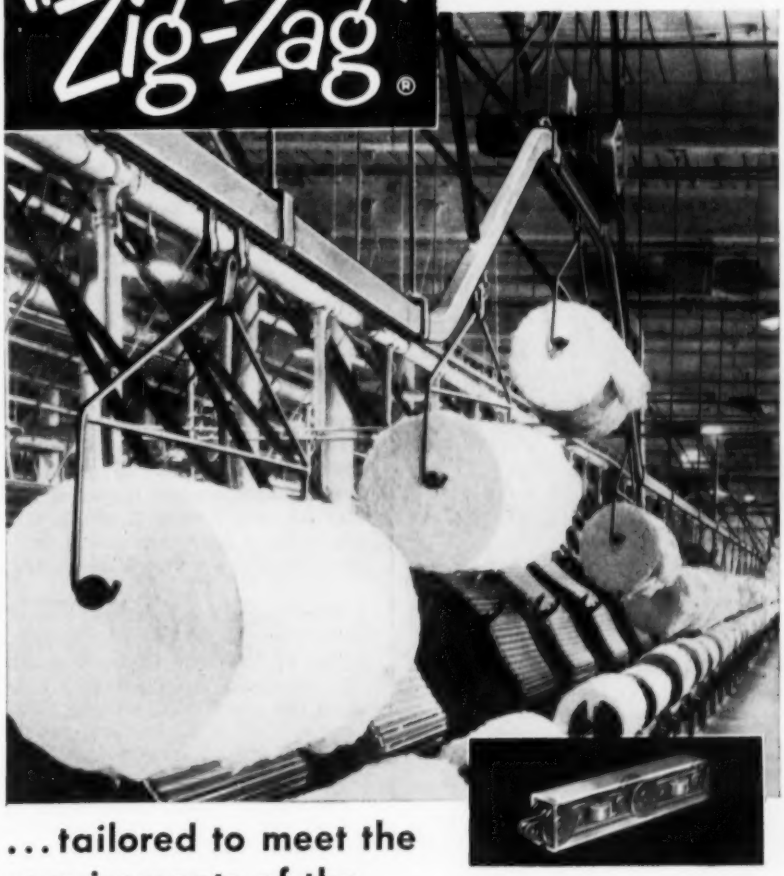
J. Warren Binns has resigned as superintendent of Andrew Y. Michie & Sons Co., Philadelphia, Pa., following 25 years of service.

The election of **Joseph McCleary, Jr.,** to the post of vice-president, marketing, by Mohasco Industries, Inc., Amsterdam, N. Y., is announced. Mr. McCleary had been production control manager for Mohawk Carpet Mills, now a division within Mohasco, until he was elected president of Charles Lachman Co., Inc., at Phoenixville, Pa., in 1951. His headquarters are in Mohasco's main offices in Amsterdam.

Newly elected president of the Tufted Textile Manufacturers Association is **W. H. Sparks,** president of Sparks, Inc., Dalton, Ga. Named vice-presidents were: **W. H. Griffin,** Luxury Carpet Mills, Dalton; **Sam Hodges, Jr.,** Alabama Bedspread Co., Scottsboro, Ala.; **Ed Lacey,** Russell-Lacey Manufacturing Co., Fairmount,

R-W "Zig-Zag"®

CONTINUOUS POWER CONVEYORS



...tailored to meet the requirements of the Textile Industry!

Today's competitive textile market makes fast, efficient materials handling a *must* and production efficiency demands a constant flow of materials and maximum use of all available space. R-W "Zig-Zag" Conveyors effectively meet these demands by keeping things moving on the production line and utilizing, to full extent, valuable overhead space. R-W "Zig-Zag" Conveyors are extremely flexible ... easily move up, down, in, out and around ... carry unit loads up to 125 lbs. at speeds from one inch to 100 feet per minute. "Zig-Zag" systems may be easily altered, expanded or relocated by plant personnel.

"Zig-Zag" QUALITY FEATURES

- **SAFE**... all moving parts are fully enclosed.
- **STRONG**... horizontal and vertical units alternate in a continuous chain traveling through a rugged steel track.
- **FLEXIBLE**... easily installed in any plant. Easily changed or relocated to meet plant alterations or expansion.
- **ECONOMICAL** to purchase, install and operate.
- **SPACE-SAVING**... available with standard horizontal or vertical curves ... two-foot radius (others available).

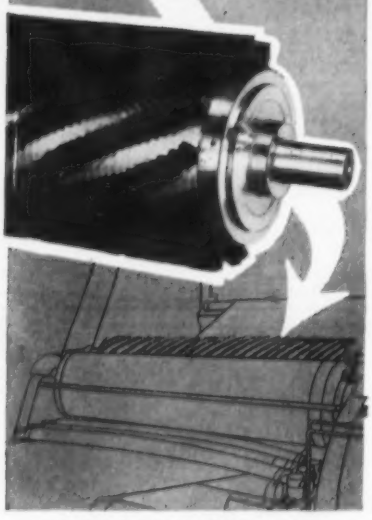
WRITE TODAY for complete information Request Catalog No. A-93R

Leading manufacturer of Track Hangers, all types of hardware and Electric Door Operators for over 75 years.

Richards-Wilcox MANUFACTURING COMPANY
Materials Handling Division

440 W. THIRD STREET, AURORA, ILLINOIS • Branches in Principal Cities

WHY JENKINS' METLKOR® BRUSHES are on JAMES HUNTER SQUEEZE ROLLS



A JAMES HUNTER SQUEEZE ROLL WITH JENKINS' METLKOR BRUSH

James Hunter Machine Co., North Adams, Mass., wanted a brush to stand up when removing acidified flock from their Carbonizer Squeeze Rolls. Jenkins' engineers designed a METLKOR brush with exposed metal parts of stainless steel and bristle of acid-resistant Nylon.

Mr. Frank B. Morrill, Chief Engineer, James Hunter Machine Co., says: ". . . we have been using Jenkins' brushes for flock removal on our Squeeze Rolls for years . . . they do a much better cleaning job than the brush previously used, and stand up several times longer . . ."

This top textile machinery manufacturer has proven the efficiency of Jenkins' METLKOR — the cylinder brush that lasts many times longer and can be re-bristled! If you have any standard or special brush problem, write us today.

Specify Jenkins' METLKOR
the original . . . the best Metal-Core Brush

METLKOR®
CYLINDER BRUSHES
and LIFEWOOD® WOOD BACKED BRUSHES

M. W. JENKINS' SONS, INC.
Serving Industry for 80 Years
232 Pompton Ave., Cedar Grove
Essex County, N. J. • CEnter 9-5150

Personal NOTES ABOUT MEN YOU KNOW

Ga.; **Russell Gebert,** James Lees & Sons, Bridgeport, Pa.

A recent addition to the staff of the product development department of the research and development division of Callaway Mills Co., LaGrange, Ga., is **L. Carmer Robinson,** textile technologist. Mr. Robinson recently completed a tour of duty with the U. S. Army in Korea as project engineer and operations and training officer.

J. Harold May has become general manager of the Cranston (R. I.) Print Works Co. Progressing from apprentice printer, to journeyman, foreman, division superintendent, plant superintendent, resident manager, and assistant general manager, Mr. May succeeds **Russell C. Smith** who continues in his capacities as vice-president and director of the firm.

Newly-named technical director of Dixie Mercerizing Co., Chattanooga, Tenn., is **Lawrence C. Leatherland,** who has been associated with Sylvania Industrial Corp. and the Institute of Textile Technology. In his new capacity Mr. Leatherland is in charge of coordinating and directing technical and development procedures in spinning and finishing processes.

At E. M. E. Mills, Inc., New York, N. Y., **Melford Jablin** has been promoted to the office of vice-president in charge of sales; and **Ira Shapiro** to that of comptroller.

Returning to Fieldcrest Mills, Inc., Leaksville, N. C., plant, as assistant superintendent is **Frank E. Barron,** formerly a member of the engineering department, who recently has been assistant plant manager of the Cheraw (S. C.) Cotton Mills.

Frank L. Armitage, general manager of the Firestone Industrial Products division of Firestone Tire & Rubber Co., Fall River, Mass., has retired, and plans to reside in Florida. He is succeeded by **Charles J. McCready** as plant manager.

At Fulton Bag & Cotton Mills, Atlanta, Ga., **E. A. Cronheim** recently retired as assistant secretary, following a period of fifty-five years of continuous service with the firm.

P. H. Hanes Knitting Co., Winston-Salem, N. C., announces that **Frank Hanes, Jr.,** who for the past several years has been engaged with Hanes in manufacturing and sales, has been appointed director of quality control.

Riegel Textile Corp., Trion, Ga., has announced the appointment of **William M. Pittendreigh** to the newly-created position of director of research to be responsible for all of Riegel's research and development activities including fabric, chemical, and machinery. Mr. Pittendreigh was formerly superintendent of the cotton mill at Ware Shoals, S. C., a position which is now held by **William Alfred Pearson,** previously superintendent

Mr. Pearson

Mr. Eubanks

Mr. Ashley

Mr. Pittendreigh

of the preparatory mill, Trion division. **William E. Ashley,** who had been assistant superintendent of the cotton mill at Ware Shoals, was named to replace Mr. Pearson. **Mark B. Eubanks,** formerly purchasing agent, has been appointed as director of purchasing and transportation. * * * Newly-named personnel manager of the Ware Shoals plant is **Ben P. Robinson** who was formerly with Amerotron Corp.'s southern mills and succeeds **Joe Jelks** who has joined J. P. Stevens & Co., Inc., as head of the personnel department.

Vanity Fair Mills, Inc., Reading, Pa., announces the promotion of two officials at its subsidiary, Monroe Mills, Monroeville, Ala. **Ward M. Ostberg** was named vice-president in charge of industrial and public relations, and **Edward G. Michaels, II,** was appointed vice-president in charge of production.

Halbert McNair Jones, president and treasurer of Waverly Mills in Laurinburg, N. C., and treasurer of Morgan-Jones, Inc., of New York City, is the 1957 "Man of the Year" of the North Carolina State College Chapter of Phi Psi. He was chosen to receive the honor on the basis of his leadership and outstanding work on behalf of the textile industry and for his activities as a civic and church leader.

Recently named director of Pilot Mills, Raleigh, N. C., was **Sam G. Riley, Jr.,** general manager.

Promoted to assistant general manager of Roanoke (Va.) Mills, Inc., was **Rupert M. Cassell,** formerly plant superintendent.

United States Rubber Co. announces the retirement of **M. A. Kirkland** from the position of assistant production manager of the textile division, Winnsboro, S. C., following a period of 37 years of service with the firm. Mr. Kirkland plans to reside in Longtown, Fairfield County, S. C.

At USF-Aspinook finishing division of the Gera Corp., Jewett City, Conn., **William J. Durocher,** president, was named chief executive officer of the division, following the death of W. A. Broadfoot. Mr. Durocher will make his headquarters in Norwich, Conn.

Russell Katzenmoyer, formerly with Barnhardt Brothers Co., has joined the staff of the National Association of Hosiery Manufacturers, where he is working with the Better Hosiery Council Seal program, and is responsible for the testing and other details which form a part of the program.

The Midwest Woolen Manufacturers Association, in a recent election, named as its president **Adolph Heinze,** Amana (Iowa) Woolen Mills, succeeding **Robert Klemer,** Faribault (Minn.) Woolen Mill Co. New vice-president is **Harwood Orbison,** Appleton (Wis.) Woolen Mills, succeeding Mr. Heinze.

Virginia Woolen Co., Winchester, Va., a division of United Merchants & Manufacturers, Inc., has announced that **Herman Sayles** has been named superintendent succeeding **Harry E. New** who continues as assistant superintendent. Mr. Sayles was previously associated with Abbot Worsted Co., Seneca, S. C.

Sanford L. Cluett, vice-president of Cluett, Peabody & Co., Inc., Waterford, N. Y., and inventor of the compressive shrinkage process for the pre-shrinking of cotton fabric, has been made a fellow in the American Society of Mechanical Engineers. The award was given at a dinner meeting of the Schenectady ASME chapter.

The American Society for Testing Materials, Philadelphia, Pa., has chosen as president **Richard T. Kropf,** vice-president and director of research for Belding Heminway Co., Inc., New York, N. Y. Mr. Kropf also directs the activities of the industrial thread division and is vice-president and general manager of Belding Corticelli Industries, Inc.

The retirement of Professor **Harry C. Brown,** chairman of the division of engineering at Lowell Technological Institute, effective September 1, has been announced. Professor Brown has also served as head of Lowell Tech's textile engineering department since 1955 and has pub-

Our service is tailored to provide all the working capital any qualified client needs, without increased borrowing, diluting profits or interfering with management.

Information available for any manufacturer or distributor with $500,000 or more annual sales.

Textile Banking Company

55 Madison Avenue, New York 10, N.Y.

Providing operational financing for the apparel, electronics, furniture, leather, plastics and textile industries.

Subsidiaries:

T. B. C. Associates, Inc., New York **Southwest Texbase, Inc., St. Louis**

Personal NOTES ABOUT MEN YOU KNOW

lished several technical papers and bulletins.

Harry C. Minasian has been named to succeed the late Leon G. Boghossian as plant superintendent of Concordia Manufacturing Co., Inc., Central Falls, R. I.

At Glen Raven Silk Mills, Inc., Burnsville, N. C., **Torrey M. Tyner** has been promoted from manager of the mills to vice-president in charge of production. **Donald I. Burhoe** has been elevated from administrative assistant to secretary of the mills.

John M. Dempsey, formerly general manager of the Cavell division (pile fabrics), Collins & Aikman Corp., New York, N. Y., has been elected vice-president of the firm.

James B. Curley, staff assistant in the technical and textile service department of American Viscose Corp., Marcus Hook, Pa., has been elected chairman of the textile division of the American Society for Quality Control. Others elected were: vice-chairman, **Kenneth Edgar,** Henderson, Lindsay & Michaels, Greenville, S. C.; secretary, **Byron A. Griffin,** West Point (Ga.) Manufacturing Co.; treasurer, **Robert G. Mitchell,** International Latex Corp., Dover, Del.

Appointment of **John P. Chubet** as executive vice-president of Hightstown (N. J.) Rug Co., has been announced. Mr. Chubet, who is also a member of the board of directors, was promoted from vice-president in charge of sales.

R. R. McGee has been transferred from the Winnsboro (S. C.) Mills of U. S. Rubber Co., where he was planning engineer for the textile division, to Hogansville, Ga., to fill the position of assistant manager formerly held by **R. B. Fort, Jr.** Mr. Fort was appointed assistant production manager of the textile division in Winnsboro, the position formerly held by **M. A. Kirkland,** retired.

Harriss & Covington Hosiery Mills, Inc., High Point, N. C., has announced that **James Lipscomb** will have over-all responsibility for operation of the former Wilkes Hosiery Mill at North Wilkesboro, with offices in High Point. Mr. Lipscomb was formerly with Wrenn Hosiery Co., at Thomasville, N. C.

Dr. Harold Canning Chapin and **Albert Edward Sampson,** recently retired national secretary and treasurer, respectively, of the American Association of Textile Chemists and Colorists, have been unanimously

Dr. Chapin

Mr. Sampson

elected honorary members of the association. They will be presented with certificates attesting to their election to honorary membership in AATCC at the association's 1957 convention. * * * **P. J. Wood,** technical director of Royce Chemical Co. and

Mr. Wood

past president of the American Association of Textile Chemists & Colorists, has been named the 14th winner of that association's Olney Medal, highest AATCC award, given each year for "outstanding achievement in the field of textile chemistry." The medal will be formally presented to Mr. Wood at the annual Olney Award luncheon to be held during the AATCC convention in November.

Elmer C. Wendorf has joined Burlington Hosiery Co. in charge of styling, designing, and development work for its men's and children's division, a newly-created, specialized position, with offices in the division's manufacturing headquarters in Asheboro, N. C. Mr. Wendorf was formerly with the men's division of Holeproof Hosiery Co., Marietta, Ga., in a similar capacity.

HEAVY MONEL BELLOWS
Automatically adjust to pressure
ROTARY UNION
MECHANICAL SEAL
Does the Job!
SEAL RING
Optically flat surface assures perfect seal
The precision mechanical seal of the Rotary Union stays right long after other joints are leaking — without adjustments or mechanical maintenance. Saves on fluids and gases— on parts—and on maintenance labor. There is a Rotary Union for every rotating joint application in pipe sizes from ¼" through 3" and in 40 types and sizes. For full information contact our nearest office or write for Bulletin 700T.
"WHERE Good Connections COUNT"®
*Trade Name — Patented
Home Office and Factory:
PERFECTING SERVICE COMPANY, 332 Atando Ave., Charlotte, N.C.
BRANCH OFFICES: BALTIMORE — CAMDEN, N. J. — CHICAGO — CLEVELAND — LOS ANGELES — NEW YORK — PROVIDENCE — MONTREAL — TORONTO

OBITUARIES

Bernard Bernstein, 78, president and treasurer of Bernson Silk Mills, New York and Buena Vista, Va.

Charles S. Cole, 71, retired president of Fabric Fire Hose Co., Sandy Hook, Conn.

Harry B. Craft, vice-president, and manager of operations of American Associated Consultants, Inc., Atlanta, Ga.

B. H. B. Draper, Jr., 49, former treasurer and director of Draper Corp., Hopedale, Mass.

Joe Dubrof, 52, general manager of Carolyn Chenilles, Inc., Dalton, Ga.

Alex I. Greenhill, president of Trim Knit, Inc., New York, N. Y.

Dayton Hedges, 74, textile industrialist, Havana, Cuba.

Thomas S. Kidd, retired official of Allied Textile Printers, Inc., and Passaic (N. J.) Piece Dye Works.

Israel I. Kotzen, 84, chairman of the board of Revere Knitting Mills, Malden, Mass.

Max B. Mueller, 70, president Carlton Hosiery Mills, Inc., Carlton Hill, N. J.

Barnard Murphy, 58, vice-president for administration of Riegel Textile Corp., Trion, Ga.

George W. Murphy, 61, general manager, The Mary Leila Cotton Mills, Inc., Greensboro, Ga.

Edward E. Poor, Jr., 67, retired vice-president of Standard Bleachery & Printing Co., Carlton Hill, N. J.

Britt W. Robinson, 72, retired superintendent of Callaway Mills Co., Milstead, Ga., plant.

Robert J. Ross, textile print blanket sales engineer, textile products department, Dewey and Almy Chemical Co. division of W. R. Grace & Co., Cambridge, Mass.

Maurice N. Roux, 52, former president of Philadelphia Penn Worsted Co., Philadelphia, Pa.

Isadore Schepps, 65, co-owner of the Lynn Textile Mills, Holyoke, Mass.

J. Baynard Smith, superintendent, Standard plant, Standard-Coosa-Thatcher Co., Chattanooga, Tenn.

Frank M. Stevenson, 58, head of Globe Dye Works warp dyeing department, Philadelphia, Pa.

Frederick W. Symmes, 77, president, Piedmont Plush Mills, Greenville, S. C., and a former president of ACMI.

Irving T. Youland, purchasing agent for the former Amoskeag Lawrence Mills, Manchester, N. H.

Executive views

(from page 75)

it a character all its own: Under the Russell-Whitten proposal mills would have to buy certificates for any synthetic fibers "similar to cotton" which they chose to process. The aim of this inspired flash, as its sponsors freely state, is to force up the price of rayon so that cotton would be competitive. As Congressman Whitten put it, the bill would keep producers of synthetic fibers from "taking advantage" of the farm program.

We suppose that there is no logical reason why the program shouldn't be extended to other competitors of cotton — paper towels, plastic film, or what have you—and perhaps garment manufacturers should buy certificates for the backs in backless gowns and the loss in cotton consumption when Bermuda shorts replaced pedal pushers.

Or maybe that's next.

NON-FLUID OIL

TRADE MARK REGISTERED

THE CARDING LUBRICANT THAT ASSURES EVEN SLIVER

Uneven card sliver is ordinarily due to the doffer and top flats getting out of adjustment as a result of bearing wear. Common dripping, leaking oils do not prevent this wear, because they don't stay in the bearings long enough.

Drip-less and waste-less NON-FLUID OIL adheres to bearing surfaces, lubricating dependably until entirely consumed. It keeps off card clothing and outlasts oil—saving you money on lubricant and application cost.

We are prepared to furnish mills with skilled lubrication engineering service. NON-FLUID OIL has been used successfully for years by most leading mills. Send for informative bulletin T-5 and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

292 MADISON AVE., NEW YORK 17, N. Y.

WORKS: NEWARK, N. J.

So. Dist. Mgr.: Lewis W. Thomason, Jr. Charlotte, N. C.

WAREHOUSES

Birmingham, Ala. Greensboro, N. C.
Atlanta, Ga. Greenville, S. C. Detroit, Mich.
Columbus, Ga. Chicago, Ill. Providence, R. I.
Charlotte, N. C. Springfield, Mass. St. Louis, Mo.

1898 61 1957 NON-FLUID OIL 61 YEARS OF LUBRICATION SERVICE TO INDUSTRY

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

What the TEXTILE MILLS are doing

Abney Mills, Greenwood, S. C., this year will distribute an average vacation pay check of $85.00 to each of the 6934 eligible employees of that organization. Persons who have been employed continuously for at least one year from April 1, 1956, will receive vacation pay figured at the rate of 2% of their annual earnings from April 1, 1956 through March 31, 1957. Persons with five continuous years of employment will receive 4% of their earnings, calculated over the same period as above.

A high speed tenter frame is being installed in the plant of **Ansan Dyers & Finishers, Inc.,** 1901 Park Ave., New York 35, N. Y. The frame, equipped with the latest of automatic features, went into operation in July. Ansan finishes laces, nets, tulles, and knitted fabrics.

During the week of July 4th, **Dan River Mills, Inc.,** Danville, Va., was the host for a series of activities in recognition of its diamond anniversary year. Part of the activities included plant open house for two days in which people from Danville and the surrounding area were given guided tours through the plants. * * * For the fourth consecutive year Dan River has received one of the National Safety Council's highest awards for performance in the field of industrial safety. The latest is the Council's Award of Merit which is awarded to plants which have accident frequencies 31% better than par, and a severity rate 10% better than par (par rates are computed by the NSC from a plant's experience in other years and from the rates of the industry classification to which the plant belongs). Dan River bettered frequency par by 58%, and bettered severity par by 23%. * * * Riverdan Benevolent Fund, Inc., will sponsor a project to provide free polio shots to employees of Dan River.

From a recent announcement comes the information that **Berkshire Knitting Mills,** Reading, Pa., is opening its second plant in Northern Ireland. The plant is to be near Belfast, in County Down. The present Irish plant is producing full-fashioned hosiery at Newtownards, County Down.

Cabin Crafts, Inc., Dalton, Ga., has assumed possession of a 36,000 sq ft warehouse at 50-25 34th St., Long Island City, N. Y., to consolidate all storage and cutting operations under one roof. Aside from being one of the most modern of materials handling plants, the warehouse is completely fire-resistant, has air conditioned locker rooms and offices, and a lunch room reserved for the use of the staff. * * * The recent addition to the Springdale plant, which brings the plant floor space to 130,000 sq ft, is being used for productive machinery and for the storage of both raw and finished materials.

*13¾" and 21" diameter heads

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG BONUS OF

SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 49-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

Over a Quarter Century of Dependability in Yarn Beams

MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON • PENNA.

PROPER UTILIZATION OF LABOR EQUIPMENT MATERIALS

CAN MEAN A HEALTHIER PROFIT PICTURE FOR YOUR MILL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"Of all the industrial engineers with whom we have had contact, we entertain a higher regard for this organization than any other, and that is based on results entirely."

*A LARGE MIDWESTERN MANUFACTURER of HOSIERY, NIGHTGOWNS, PAJAMAS, ETC.**

*Name on request

WRITE FOR FREE COPIES OF

★ **LABOR & MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES.**

★ **A FAIR DAYS PAY AND IN RETURN, A FAIR DAYS WORK.**

AMERICAN ASSOCIATED CONSULTANTS INCORPORATED

D. S. KEOGH, President

250 Park Avenue, New York 17, N. Y.
Grant Building, Pittsburgh, Pa.
284 Edificio Pestrada, Medellin, Columbia, S. A.

At the spring meeting of the Carpet Institute, Charles Karagheusian, chairman of the board of **A. & M. Karagheusian, Inc.,** was presented a silver bowl in recognition of his services during the 1955-1956 period as chairman of the board of trustees of the Carpet Institute. * * * Karagheusian's second annual scholarship to the Georgia Institute of Technology has been awarded. The recipient, Ellis R. Norton, a member of the Albany (Ga.) High School graduating class, will enroll in Tech this fall in the School of Industrial Engineering.

The owners of **Midwest Rug Mills** of Amboy, Ill., who also own **Mountain Rug Mills** in Fletcher, N. C., have announced plans to establish a yarn spinning mill on Thompson St., Biltmore, N. C., to supply a part of the firm's annual consumption of 2,500,000 lb of yarn.

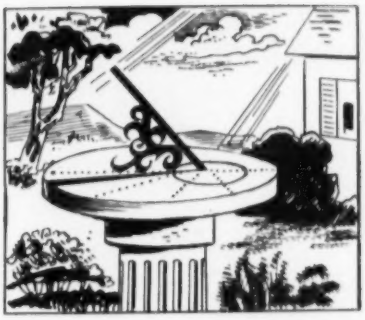
PhilCord Corp., Monroe, N. C., has announced plans to suspend operations. The announcement stated that the equipment will be moved to another location (as yet undisclosed) and used in conjunction with seamless equipment. The plant has been producing full-fashioned hosiery.

Mount Hope Finishing Co., Butner, N. C., has added 12,000 sq ft of floor space to its plant facilities, a recent announcement states.

C. H. Masland & Sons recently shipped (dismantled) by rail a ¾ velvet loom from Carlisle, Pa., to Millbrae, Calif. (ten miles south of San Francisco) for use in the sales office of Gene Bried Rug Master, Masland retailer associate. Gene Bried wanted the loom to show his customers how it made carpet. The store personnel start and stop the loom. Harry Lamson, Carlisle loom fixer, flew to California to assemble the loom, and had it running two days after he arrived.

A 55,000 sq ft knitting, dyeing, and bleaching plant is under construction by **Penn-Val Dyeing Co.,** Schuylkill Haven, Pa., in the Willow Lake section. The plant will replace the one destroyed by fire on March 7. Half the structure will be devoted to knitting.

The purchase by **Chatham Mfg. Co.,** Elkin, N. C., of **Springfield (Tenn.) Woolen Mills Co., Inc.,** has been confirmed. The plant will continue to produce blankets and apparel fabrics. * * * A recent announcement



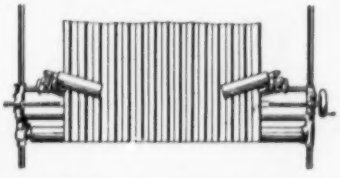
WORLD-FAMOUS GUIDER -

. . . . the sundial (first outdoor clock) helped man to guide the use of his most precious commodity, time.

WORLD-FAMOUS, too . . . in textile manufacturing is the ever-dependable

FAMOUS FOR SAVING HUNDREDS AND HUNDREDS OF DOLLARS YEARLY BY

- **minimizing costly equipment repair "down-time"**
- **eliminating double edges and spattering**
- **speeding fabric processing**
- **preventing woven fabric spoilage**
- **maintaining cloth alignment and constant width**



Add to all the above advantages: no weights, levers, nor linkages to bother with, extremely low initial and operating costs, infinite adjustability to handle fabrics from the lightest to #8 duck, even in operation . . . then you'll understand why MECHO is considered the greatest buy in Guiders! *ORDER yours TODAY.* You'll wonder how you ever got along without it.

FREE! Write for Catalog and ask about MECHO's complete Guiding Service, standard in hundreds of finishing plants handling semi-rigid plastics, artificial leather and rubber, felt, and gauze. Stainless steel, acid- and moisture-resistant units with sealed bearings also available.

GUIDER SPECIALTY COMPANY
431 W. Rock Ave.
New Haven 15, Conn.

What the TEXTILE MILLS are doing

also states that Chatham has purchased the blanket business of both F. C. Huyck & Sons, Renssalaer, N. Y., and the North Star Woolen Mill Co., Sanford, Me.

Schwarzenbach Huber Co., with plants in Front Royal, Va., Juniata, Pa., and Luray, Va., has become sole owner of all outstanding stock of Stehli & Co., New York City. This "joining of forces," according to Robert M. Schwarzenbach, new president of Stehli & Co., "represents a powerful combination of fashion leadership with up-to-date production facilities." Stehli had one weaving plant at Harrisonburg, Va.

An agreement has been reached between **J. P. Stevens & Co., Inc.,** and **Forstmann Woolen Co.** on the acquisition by Stevens of all outstanding stock of Forstmann and **Julius Forstmann & Co.** Forstmann Woolen Co. will continue its current manufacturing, merchandising, and selling operations under the present Forstmann management.

Plans have been announced for enlarging the plant facilities of **Softspun Knitting Mills** of Henderson, N. C. Knitting capacity will be increased, and a finishing department established.

A recent announcement states that **United Industrial Syndicate** has purchased **Seymour Woolen Mills.** Both firms are in Seymour, Ind. The plant contains 8 sets of cards and 60 broad looms.

Roxbury Carpet Co. is constructing a new card room and is enlarging the spinning room at the Saxonville, Mass., plant. When completed with the present expansion programs at Saxonville and at the Whittall division in Worcester, Mass., the firm will be able to run all divisions at capacity from the yarns produced at Saxonville.

Virginia Lee Hosiery Mills, Inc., Hillsville, Va., has leased additional floor space in that city.

New Shearing Machine Has Stationary Shear Cylinders

Provides Accurate Shearing Close to Seams

In the new **Vollenweider** Shearing Machine the shear cylinders remain stationary — rigidly connected to the machine frame. Height adjustment is made by lowering or lifting the **shearing beds.** As a result you get much more accurate control of shearing height and quality — plus a shearing operation entirely free from play and vibration. Shearing height is adjustable to an accuracy of .004". The two shears are mounted vertically so that entire process can be controlled and observed from one position. Shearing extremely close to seams is aided by automatic machine slow down as seams approach the shear. Stepless adjustments permit cloth speeds from 16.5 to 195 ft./min., and shearing cylinder speeds from 500 to 1500 rpm. Standard machines accept maximum widths up to 63 and 78 inches.

Write For Additional Information

COSA TEXTILE DIVISION — *Lay-on-air & Tenter Dryers, Padders & Other Finishing Mach. · Spindles · Roller Bearing Inserts · Automatic Moisture Control & Others*

COSA CORPORATION, 405 LEXINGTON AVENUE, NEW YORK 17, N. Y.

SUPPLIERS News — WHAT THEY ARE DOING

At the **Addressograph-Multigraph Corp.,** D. G. Hartman has been appointed Addressograph sales manager and W. S. Anderson, Multigraph sales manager. They were promoted from the rank of assistant sales managers of Addressograph and Multigraph respectively.

American Cyanamid Co. has broken ground for a modern plant near Pensacola, Fla., for the production of its new Creslan acrylic fiber. Scheduled for completion late in 1958, the plant will be situated on an 1,800-acre tract fronting on Escambia Bay and will be known as the company's Santa Rosa Plant.

James B. Curley of **American Viscose Corp.** has been elected chairman of the textile division of the American Society for Quality Control. He had previously been a district counsellor. * * * Formation of a technical and textile service department, representing the merger of the textile research department and the corporation technical department, was recently announced. Karl M. Currier, director of textile research, has been appointed director of the new department and Dr. Charles J. Geyer, Jr., manager of the technical department, is newly-named assistant director.

The Bristol Co. of Waterbury, Conn., has opened a new branch factory and repair laboratory at 6800 East Acco St., in Los Angeles, Cal., under the management of J. W. Peckham, formerly west coast district manager. * * * The Pittsburgh, Pa., district office has recently moved into a new building at 2250 Noblestown Road to house the sales and service staffs.

Three new sales representatives for the organic chemicals division of **Dewey and Almy Chemical Co.,** division of W. R. Grace & Co., and their territories are Cornelius F. Sullivan, New England, formerly with the Dow Chemical Co.'s plastics division; Amos J. Miner, Chicago, previously in sales and market research at the J. T. Baker Chemical Co.; and James H. Aungst, S. C., Ga., and Fla., who

has been with Merck & Co. Oscar W. Kaalstad, formerly in the latter territory, will transfer to the west coast, working from the San Leandro, Cal., office.

Becco Chemical Division of Food Machinery and Chemical Corp. has made V. E. Moore manager of its west coast territory.

Benjamin R. Ebersman, president of **Hemphill Co.** before its acquisition by the Draper Corp., has resigned from active participation in the company affairs. He has agreed to remain as consultant to the latter firm until the end of the year.

Changes in executive personnel at **Fairbanks, Morse & Co.** include the reassignment of three vice-presidents as follows: Robert H. Morse, III, who was in charge of sales, is now in charge of budgets and planning; V. H. Peterson, formerly in charge of engineering, presently is in charge of sales; John A. Cuneo, who was vice-president and assistant to the president, is now vice-president in charge of foreign operations. The promotion of John C. Elmburg from assistant general sales manager to general sales manager is also announced.

Newly opened at 2121 East 40th St., Savannah, Ga., is a sales and engineering office for **Ferguson Gear Co.** Harvey D. Black is in charge of the new office, which will cover northern Florida, southern Georgia, and the coastal area.

Fitchburg Spinners Sales Corp. has appointed **Franklin Process** to represent Fitchburg in all states from Maryland south on its combed Egyptian heather yarns. Sales at Franklin's southern division in Greenville, S. C., are being directed by B. S. Phetteplace, vice-president, and the sales representatives are James R. Garner and E. T. Wrenn. At the central division, R. F. Strahley, vice-president, directs sales and the representatives are Hubert O. Fry, Raymond C. McCarthy, Jr., and David M. Robinson.

The instrument manufacturing business of the late Sherman W. Frazier will be carried on by William Grote and R. E. Ward, under the name, **The Frazier Precision Instrument Co.,** at 8913 Glenville Rd., Silver Spring, Md. The new firm will continue to furnish the instruments and services formerly provided by Mr. Frazier.

D. L. Friday has resigned as southern sales manager for Kidde Manufacturing Co. to form the **Friday Textile Machine & Supply Co., Inc.** In addition to manufacturing textile parts and appliances, the new firm will represent J. M. Nash Co., Kennett Equipment and Machinery Co., and Allen Beam Co.

Newly appointed sales representative in the Philadelphia area for **General Latex & Chemical Corp.** is Thomas C. Holst, who previously represented Laurel Soap Manufacturing Co. in the same area. Mr. Holst's headquarters are at the company offices, 666 Main St., Cambridge, Mass.

The Dobeckmun Co. announces the formation of Dobeckmun de Mexico, S. A. de C. V., a subsidiary company in Mexico City for the production and sales of Lurex metallic yarns. Warren Moore, formerly of the New York sales office, is directing sales operations for the new subsidiary. The manufacture of Lurex will be done in Monterrey by Artifactos de Papel, S. A., under Dobeckmun supervision.

The name of the firm, **W. D. Dodenhoff Co., Inc.,** has been changed to James Hunter, Inc., of which the former had been a wholly-owned operating subsidiary for about eight months. The company will continue to operate as such, with the same personnel and officers, the only change being in the firm name.

Interchemical Corp., textile colors division, has announced that its New England headquarters are now located in modern quarters at 201 Armistice Blvd., Pawtucket, R. I.

R. M. Roach has been named New York district sales manager of **Jefferson Chemical Co.,** replacing George H. Kahl who has resigned. R. J. Robinson has been transferred from Cleveland where he was resident salesman, to the New York office and J. M. Luger, formerly of the company's Houston sales staff, has moved to Cleveland to take over the territory previously handled by Mr. Robinson.

The appointment of three men to as many newly-created supervisory positions in the application engineering department of **Taylor Instrument Companies** has been announced. John E. Barber, since 1946 associated with the firm in application engineering,

The *New* **Precision Card Drive** *Complete Compact Safe*

Complete:
A preassembled package unit including motor, drive, and control box. No extras to buy.

Compact:
Requires same space as pulley units.
(Top view)

Quick Installation:
Just slide on cylinder shaft — bolt — and connect power.

Smooth Drive:
Rheostat control starts smoothly and accelerates without jerking or overloading. Inches cards into position for settings and adjustments.

Safe:
Eliminates exposed pulleys, belts and drives. All parts of the Precision Drive are completely enclosed and control box is easily accessible.

Tops in Efficiency:
Eliminates costly down time due to line shaft and belt maintenance. Smooth positive drive improves quality.

Modernize your cards with the Precision Electric Clutch Card Drive. Write for Bulletin 225 for complete information.

Precision Gear & Machine Co.
2001 N. Tryon St. • ED 4-6857
Charlotte 1, North Carolina

SUPPLIERS News
WHAT THEY ARE DOING

has become assistant department manager. Named as group leaders are Elliott M. Barr and Donald T. Gregg. Mr. Barr will handle the application side of electronic and electric contact instruments. Among other lines of control instruments, Mr. Gregg will head up applications in the textile and other industries.

At the **National Aniline Division** of Allied Chemical & Dye Corp., Edward J. Allard has been named resident manager for New England, with headquarters in both the Boston and Providence offices. Since 1950 Mr. Allard has held the position as resident manager of the Providence sales branch. Appointed assistant resident manager in the Boston sales branch was Michael E. Keane who was advanced from the position of senior salesman. A. E. Sampson, Boston resident manager, has retired. * * * The retirement of R. Robertson, effective September 1, has been announced. Paul J. Sullivan, who has become resident manager of the Philadelphia sales branch, is succeeded as manager of detergent sales by Leslie C. Wizemann with headquarters at the company's general office, 40 Rector St., New York, N. Y. Mr. Wizemann has served in the sales development of the firm's line of surface active agents.

Russell W. Wetjen has rejoined the staff of **Neptune Meter Co.,** as sales manager for petroleum, LP-gas, and industrial meters of the Neptune Meter Co. He succeeds Walter H. Sieger, who has been elected president of Revere Corp. of America, a Neptune subsidiary.

Harold C. Wood has been appointed a district manager for the **Onyx Oil and Chemical Co.,** in charge of the sales and service office at Boston, Mass., which serves the textile and industrial customers in New England and the eastern half of New York state.

Clifton W. Corbett has joined the staff of **Selas Corp. of America** as assistant to the manager, dryer, oven and Lehr division, to serve in a sales-sales engineering capacity. He will direct his activities to increasing the sales of heat processing equipment to the textiles, plastics, paper, and other industries. Mr. Corbett was formerly associated with Peirce-Phelps, Inc., as sales engineer.

W. Schlafhorst & Co., American Schlafhorst Co., and **The Terrell Machine Co.** have combined efforts to establish a service center in Charlotte, N. C., and have erected a new building housing all service facilities. A complete stock room is maintained which makes all parts available to the mills on a day's notice. In case of a national emergency or disruption of supplies from Germany, all Autocopser drawings are in escrow and are available to start manufacturing component parts in this country. All electrical equipment, such as motors, and controls, are made by American manufacturers. A training school for mill fixers has proven beneficial and more than 90 fixers have already been instructed in these classes. The two-week course includes practical and theoretical lectures on the Autocopser and is a free service to the mills.

Kidde Manufacturing Co., Inc., has opened a new sales office in the Johnston Building, Charlotte, N. C.

"SUPREME"
GRAY ROOM
BUTT-SEAM
SEWING MACHINE

With Merrow Head. Fully automatic multiplication of stitches at selvedge: automatic thread cutter for cutting thread between seams.

The Advantages of this Machine are:

1. RE-enforcement at the selvedges.
2. Increased production up to 200 seams per hour.
3. Requires only one operator.
4. Straighter seams thus eliminating wrinkles and cloth distortion.
5. Cloth held to full width while being sewn thus eliminating tendency of fabric to be narrower at the seams than in the body of the cloth. Result, fabric is free of wrinkles either side of seam with consequent saving in cloth.

BIRCH BROTHERS, Inc.
Harold W. Birch Clifford W. Birch, Jr.
Phone: PRospect 6-3512
SOMERVILLE 43, MASS.
Dyeing and Finishing Machinery and Mill Sewing Machines
Southern Representative:
JOHN C. COSBY, P. O. Box 212, Phone: Greenville 5-5926 Greenville, S. C.

COLOR RICHES
top colorfastness...color beauty...
color uniformity...color versatility
UNLIMITED for fabric, apparel, home furnishings, everything
COURTAULDS'
COLORAY®
solution-dyed rayon fiber
CAPTIVE COLOR ..."CAN'T ESCAPE!"
COURTAULDS (Alabama) Inc., 600 Fifth Ave., N. Y. 20

INDUSTRIAL ENGINEERS
Specializing in Textiles since 1914
MODERNIZATION PROGRAMS
PLANT LAYOUTS
MANAGEMENT PROBLEMS
WORK LOAD STUDIES
COST REDUCTION REPORTS
COST SYSTEMS
SPECIAL REPORTS
RALPH E. LOPER CO.
GREENVILLE, S.C. Dial 2-3868
FALL RIVER, MASS. Dial OSborne 6-8261

The transfer of Rudolph J. Wojtowicz to the Dedham, Mass., sales office of the **Chemstrand Corp.** has been announced. In his new position, Mr. Wojtowicz, who had been associated with the technical sales service department, will work with customers in their use of Acrilan and Chemstrand nylon.

Crompton & Knowles Corp. was host to about fifty members of the National Association of Woolen & Worsted Overseers, during the 74th semi-annual convention of the group. Members of the C & K engineering staff demonstrated and explained many of the scientific instruments which the loombuilding firm employs for the purpose of improving its design and product.

Formal opening ceremonies of the new stainless steel sales office and warehouse building of **Crucible Steel Company of America,** at 3400 Malone Drive, Chamblee, Ga., were held in June. The new warehouse, which is built on a 4½-acre site with 20,000 sq ft of storage area plus 5,400 sq ft of sales office space, will continue to carry a complete stock of the firm's high speed and tool steels, stainless, alloy, machinery, and other specialty steels.

C. A. "Gus" Goins has been named resident salesman in the new southeastern district office of **Wyandotte Chemicals Corp.,** M. A. Division. Although assigned to the southeastern district office headquartered in Atlanta, Ga., Mr. Goins will operate from his home in Charlotte, N. C. His territory includes both North and South Carolina as well as eastern Tennessee.

The Texas Co. announces that construction has already begun on a large and fully-equipped nuclear radiation laboratory at the Texaco research center in Beacon, N. Y. The laboratory is expected to be completed by April, 1958.

The aluminum division of **Olin Mathieson Chemical Corp.** has announced the opening at 1330 West Peachtree St., N. W., Atlanta, Ga., of its district sales office, headquarters for Olin Aluminum in Ala., Fla., Ga., N. C., S. C., and eastern Tenn. Managing the district office is John C. Spencer, district sales manager. A branch office of the district, located at 8340 N. E. Second Ave., Miami, Fla., is managed by Keith C. Carothers.

Howard Bros. Mfg. Co. announces the appointment of Warren W. Butterworth as a sales representative to the woolen and worsted mills throughout the South and parts of New York, New Jersey and New England.

Mr. Butterworth
Howard Bros.

Mr. Gieryn
Vickers, Inc.

Mr. Tuthill

Mr. Hopkins
United States Rubber Co.

Mr. Goins
Wyandotte

Mr. Lee
West Point Foundry

Mr. Barnard
David Gessner

Mr. Barry
Stowe-Woodward

Richard L. Barnard, appointed southern representative of **David Gessner Co.,** is in charge of a new southern office recently opened at 222 Piedmont Building, Greensboro, N. C. Paul F. Riedl, Gessner service representative and erector, has also moved to Greensboro with headquarters in the same office.

F. V. Gieryn is newly-named sales manager, industrial department, of **Vickers Incorporated.** Formerly manager of export sales, Mr. Gieryn in his new capacity will supervise sales of Vickers hydraulic units and systems for machine tools and other plant production machinery through twenty industrial sales offices located throughout the U. S.

Royal P. Tuthill has joined the yarn sales section of the textile division of **United States Rubber Co.** as supervisor of product development and technical service for tufting, chenille, and floor covering yarns, with headquarters at the New York office. Mr. Tuthill was formerly wool buyer and textile engineer for the textile division of the Thermoid Co. • • • Appointment of Frederick T. Hopkins as sales manager of industrial yarns and fabrics for the textile division has been announced. Formerly assistant sales manager of industrial yarns and fabrics, Mr. Hopkins succeeds Albert W. Hansen who has retired. He will direct sales of hose and belt ducks, insulating and mechanical yarns, among others.

Appointment of Robert V. (Bob) Lee as district sales manager of the **West Point Foundry & Machine Company** has been announced. Mr. Lee will supervise sales and service activities of West Point Foundry representatives in N. C., S. C., and Va. Formerly, Mr. Lee served as sales representative in both Spartanburg, S. C., and Concord, N. C.

Stowe-Woodward, Inc., has announced the appointment of David T. Barry to the position of director of marketing. Formerly sales manager for the paint brush division of the Rubberset Co., Mr. Barry in his new position will coordinate sales and marketing activities of Stowe-Woodward's three rubber roll plants in Newton, Mass., Neenah, Wis., and Griffin, Ga.

Two appointments involving key **Hyster Co.** personnel at Portland, Ore., and Danville, Ill., have been announced. Robert F. Moody, who has been eastern division sales manager of industrial trucks at Danville, has been named domestic sales manager in charge of all industrial truck sales activities in the U. S., Hawaii, Alaska, and Canada. Raymond L. Howerton, formerly assistant sales promotion manager, has become sales promotion manager, located at the Portland plant, while Dar Johnson,

SUPPLIERS News
WHAT THEY ARE DOING

manager of this department for the past 13 years, now heads an organization development program for Hyster.

Shawinigan Resins Corp. recently opened laboratories and offices in a second expansion of its research structure within the past two years. The enlarged facilities were designed to enable the department to schedule more intensive applications research in such fields as textiles, paper, surface coatings, and adhesives. 31,000 sq ft of working area now includes space for a staff of more than 75 chemists.

Werner G. Smith, Inc., announces that E. W. "Stretch" Kaufmann who recently resigned as sales manager of resin division of Archer-Daniels Midland Co., is now handling sales of Smith's line of chemical products in the Philadelphia area, acting as a manufacturer's agent.

Clinton Corn Processing Co.'s new research lab in Clinton, Iowa.

A new million-dollar research center for finding new, better, and more economical processes and products involving corn was formally opened in June by **Clinton Corn Processing Co.,** a division of Standard Brands, Inc. Both the Clinton research and technical sales service departments are housed in the modern, two-story building.

DORNSFIELDS' PATENT
ATLAS BRAND
EMERY FILLET

STOCKED BY
THE PRINCIPAL MILL SUPPLY HOUSES AND CARD MAKERS

Sample-Cutting Pinking Machines
All Sizes — hand and power

Write Today For Full Information

CHANDLER MACHINE CO.
234 West St. Ayer, Mass.

Announcing!!

A NEW SERVICE TO YOU!!

Refinishing Bakelite Traverse Rolls for No. 44 Roto-Coner Winders.

Most all mills spin good yarn. Why spoil your good yarn on worn and thread-cut Bakelite Rolls?

Don't throw those old Bakelite Rolls away — We will rework them for you. Your satisfaction guaranteed.

CHAVIS TEXTILE SALES CO.
802 Bessemer City Road
Gastonia, N. C.
P. O. Box 246 PHONE UN 4-4311

Reliance Electric and Engineering Co. held open house at its new East Coast distribution center in Elizabeth, N. J., on June 19. Kenneth R. Wright, formerly estimating engineer for the Newark district office, is supervisor of the distribution center.

A. E. Winslow has resigned his position as manager of the southern division of **Hartford Machine Screw Co.,** with no immediate announcement as to future plans.

At the new division office of **Sonoco Products Co.** in Atlanta, Ga., Mertis Carpenter, veteran Sonoco salesman, has been named resident sales manager. In his new position Mr. Carpenter will work with Luther Stokes, southern sales manager, and will supervise the salesmen of the Atlanta operation.

H. W. Butterworth & Sons Co. has announced that the firm will spend about $250,000 during 1957 in research and development of new textile finishing processes and equipment. A five-year, million-dollar program for the re-equipment of research, manufacturing, and development facilities at Butterworth's Bethayres, Pa., plant is now under way.

The reassignment of five technical representatives was recently announced by **Union Carbide Chemicals Co.,** division of Union Carbide Corp. They are: A. A. Douglas to the Albany district office; R. R. Failla to the Buffalo district office; H. R. Hubbs to the Charlotte district office; C. D. Schmidt to the Newark district office; and R. J. Spath to the Chicago district office.

F-F lubrication *(from page 151)*

go all out with an oiling program that will eliminate all your troubles; far from it. You can, however, minimize the cost and expense incurred by negligence. Under any conditions the time will come when the machine must be reconditioned because of wear. Lubrication and proper care will determine whether this will be necessary after two years of operation or whether it will be five or more.

An oiling program must be started with someone responsible for each and every part of the machines. In some of the larger mills, an oiling crew is employed, and they have specific parts of the machine to lubricate at specific times. On the other hand, in the smaller plants this would prove to be too expensive and impractical. The operators themselves must be responsible for oiling.

In a plant where the operator is responsible for oiling, complications may arise. One operator can cause the machine to be inoperative for hours due to his negligence. This should not be tolerated. It is not fair to the management or the other operators of that machine. The offending operator should be penalized.

If conditions do not permit employing an oiling crew, the machines should be divided among the operators. Each operator should be responsible for the lubrication of specific parts. The lubrication program should be arranged with certain days scheduled for oiling certain parts. Then should the machine give trouble due to neglect of lubrication, responsibility may be accurately placed.

Sometimes a machine will give trouble for a long period of time due to a sticky bearing. Often the cause of the trouble remains obscure until it is too late for any remedial action. Such incidents are expensive.

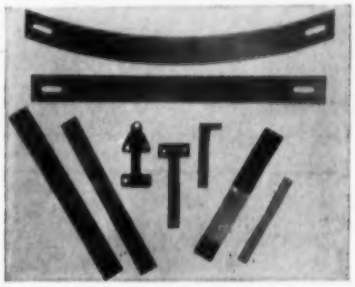
Careful planning is necessary for a good lubrication program. Some parts of the machine may be properly oiled while the machine is in operation; others cannot. One satisfactory procedure is to set aside three fifteen-minute periods each week to oil the parts that cannot be oiled properly while the machine is in operation. All machines should be stopped and the oiling done under good supervision. Using an old navy expression, "the smoking lamp should be out" during these oiling periods.

GARLAND MFG. 91st YEAR

Garland Manufacturing Company, Saco, Maine has been manufacturing rawhide products for the textile industry since 1866. H. P. Garland, founder of the company, was the author of a text on the water buffalo and rawhide applications in the textile industry which is used as a standard reference source on the subject. The company buys choice water buffalo hides from Java, Burma and other Far East sources. These hides are cured for the Garland concern in England. The rawhide is further processed in Maine and famous Garland Pickers and other rawhide products are manufactured for textile users.

NEW LINE OF LEATHER PRODUCTS

A need of the mills for superior leather products of uniform quality has prompted Garland Mfg. Company to produce check straps and by-products, such as picker checks, hold up straps, etc., of the finest imported hair-on leather as well as binder leather from the best oak tanned leather available.



In many cases, it has been found that these superior products, because of Garland's production methods, are selling at prices lower than inferior grades.

REINFORCED LOOM PICKER

Research based on a survey of mills has enabled the Garland Manufacturing Company to produce a picker that far out-lives previous types. The new loom picker has a reinforced stick hole that corrects a basic weak point of pickers generally . . . provides much longer service. Likewise the spindle hole has been improved and strengthened by locked-in flanges at both ends. The picker head has been strengthened by a heavier outside layer of rawhide, eliminating the need for a rivet through the picker head. Mills using the reinforced loom picker have reported much longer life of the picker with resultant savings.

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2⅛ inches.
Transient rate for display classified, $16.00 per inch.
Contract rate for space within 12 months period as follows:
12 inches .....$12.00 Per Inch.

POSITION WANTED: 20c per word per insertion; minimum charge $4.00 Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

FOR SALE

41—40" Saco Lowell Cards, 12" collers, 27" doffers, 100/110 wire, Abbington Stripper motions.
1—Complete Abbington Stripping System for 55 cards, has 5 stage 550 volt 40 HP motor and pump, piping and tank.
2—10x5 Whitin-Woonsocket 1952 model G10C Slubbers with Interdraft, 7½" gauge, 120 spindles each, Bijur lubrication system, single carriage.
1—10x5 Whitin-Woonsocket 1951 model G10C Slubber with Whitin Interdraft, 120 spindles, 7½" gauge, single carriage.
1—10x5 Whitin 1939 model G10 Slubber with Interdraft, 120 spindles, 7½" gauge, single carriage.
3—No. 102 Foster 120 spindle Winders, set up for 3-30 paper cones, double motor driven.

ABOVE EQUIPMENT IN EXCELLENT CONDITION

SOUTHERN MILL SUPPLY COMPANY
BOX 83 Phone LI-66553
ATHENS, GA.

BOBBINS—BOBBINS—BOBBINS

Our specialty is good used automatic loom bobbins. We also deal in twister and roving bobbins. Send us samples of what you need or what surplus bobbins you have.

CHARLES G. STOVER COMPANY
West Point, Georgia

POSITION WANTED

GENERAL OVERSEER WEAVING DESIRES CHANGE. EXPERIENCED C-K AND DRAPER LOOMS, DOBBY AND JACQUARD FANCY WEAVING. TEXTILE SCHOOL GRADUATE. A-1 REFERENCES. Reply to Box 7, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 8, Georgia.

WANTED

TWO TECHNICAL SALESMEN TO SELL RESINS, LATEX AND OTHER TEXTILE FINISHES WITH UNDERSTANDING AND ADVICE. CAR, EXPENSES AND SALARY PLUS. SEND RESUME TO: EDMUND H. EITEL, PERSONNEL CONSULTANT, HALIFAX, VIRGINIA.

CONFIDENTIAL EMPLOYMENT SERVICE

For textile mills seeking new personnel and mill executives seeking new positions.

WE INVITE YOUR INQUIRIES

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington Street Boston 8, Mass.
Telephone LIberty 2-6547

WANTED

PRACTICAL DYE MAN. FAST GROWING CENTRAL CALIFORNIA CARPET MILL NEEDS EXPERIENCED, PRACTICAL DYE MAN ABLE TO DEVELOP OWN FORMULAS AND SUPERVISE SHIFT. WOOL BACKGROUND NECESSARY. Reply to Box 8, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 8, Ga.

W. R. C. Smith Publishing Co.
Dept. T-12A
806 Peachtree St., N. E.
Atlanta 8, Georgia

Please enter / renew my subscription to TEXTILE INDUSTRIES for two years.

Name _____

Title _____

Company Name _____

Address _____

City _____

State _____

☐ **Enclosed find $3.00** ☐ **Bill me for $3.00**

Health examinations *(from page 161)*

temporary workers, or workers in dangerous jobs but not for the managerial group.

Health examinations are compulsory in 56 of the 847 companies surveyed; 132 report that the examination is "optional but urged by the company"; 40 say it is "entirely voluntary."

In general, the examinations have met with excellent acceptance. Almost half the companies report 100 per cent participation; in seven out of ten at least 90 per cent of eligible executives participate in the program.

Outside medical facilities are used by half the companies and only one-fourth use the company doctor or medical department.

Among respondents to the survey half-day examinations are most prevalent (97 companies); 50 companies do the examination in about an hour; and 77 give it a full day or several days.

All programs described by respondents include a physical examination. The majority also include taking the patient's medical history, a chest X-ray or fluoroscopy, an electrocardiogram, tests and examination of the blood and urine, and an interview with the examining physician. Almost half the companies routinely include further tests and many report that any test is given which seems to be desirable for the individual.

Since every industrial doctor is likely to encounter psychiatric problems, the need for skill in at least recognizing them is becoming more widely appreciated. Approximately half the respondent companies having health examination plans make use of the counseling interview with the examining doctor although a few companies also use psychological testing. The interview covers such problems as over-work, overtime, and whether or not the man takes a vacation. The physician also invites discussion of family affairs and tries to find out how things are going on the job. Many doctors believe that when an executive has serious emotional problems his subordinates are likely to develop more problems than average. And the higher up the organization chart the unhappiness is located, the more it is likely to spread and the more detrimental it will be to the company.

How healthy or unhealthy are executives as a group? In a new study by Life Extension Examiners covering 5,000 executives of all ages from 30 companies, 58.9 per cent of executives examined were considered to be in good shape; 41.9 were reported to be in substandard condition. "Executives are a reasonably healthy group of people with quite a good life expectancy," asserts Life Extension's medical director. "Examine any other representative group of men and you'll find them no healthier than management personnel."

*Reprints of this study are available from American Management Association, 1515 Broadway, New York 36, N. Y.

EDWARD H. BEST & CO.

Est. 1888 Inc. 1901

KNOXALL

RACE PLATE FELT
PRESSURE ROLL FELT
SLASHER JACKETS
SLASHER YARN

MASS., Boston 5 — Office
210 Lincoln Street HUbbard 2-4450

GEORGIA
W. C. HAMES 185 Pinecrest Ave.
Decatur, Ga. Dearborn 5974

SOUTH CAROLINA
B. C. YATES, JR. P. O. Box 3644
Park Place Branch
Greenville, S. C. Tel. 2-0807

AVOID

SPINNING ROOM DISRUPTION!

There are many, many reasons and causes for machine failure presenting the costly problem of "Down-time". Some of these every day problems are unforeseen - - - BUT

the foresight of . . .
ANDERSON SHIELDS
will reduce . . .
CHIPPING — SPLITTING
BREAKING
of your . . .
SPOOLS AND BOBBINS

TEXTILE
SHIELD CO., INC.
LAWRENCE MASS., U. S. A.

STATIC

can be eliminated . . . safely, inexpensively. SIMCO makes a complete line of "Midget" static eliminators, including high efficiency static bars for warpers and creels, and special easy-to-clean bars for cards and garnetts. *All are guaranteed* to be effective! Write for facts.

the SIMCO company
920 Walnut St., Lansdale, Pa.

ADVERTISER'S INDEX

A

Adams, Inc. ..... *
Advertising Council, Inc. ..... *
Aldrich Machine Works 27
Alemite Division, Stewart Warner Corp. ..216
Allegheny Ludlum Steel Corp. ..... *
Alliance Color & Chemical Co. ..... *
Allied Chemical & Dye Corp.—Nitrogen Div. 47
Allis-Chalmers Mfg. Co. ..... *
Althouse Chemical Co. ..... *
American Air Filter Co. 38
American Aniline Products, Inc. 61
American Associated Consultants, Inc. ...205
American Cancer Society ..... *
American Cyanamid Co. ..... *
American Lava Corp. 21
American Moistening Co. 7
American Monorail Co., Inc. 126
American Red Cross ..... *
American Viscose Corp. 193
Andrews & Goodrich Division ..... *
Antara Chemicals, General Aniline & Film 35
Arkansas Company, Inc. ..... *
Armstrong Cork Co. 128, 129
Ashworth Bros., Inc. 138
Askania Regulator Co. ..... *
Atkinson, Haserick & Co. ..... *
Atlanta Belting Co. ..... *
Avondale Mills, Inc. 162

B

Bahnson Co. 10
Barber Colman (Textile Div.) ..... *
Becco Chemical Division ..... *
Bendix Aviation Corporation (Eclipse Machine Division) ..... *
Best & Co., Inc., Edward H. 213
Bijur Lubricating Co. 18
Birch Bros., Inc. 208
Booth Co., Benjamin ..... *
Borne Chemical Co. 195
Branson Company ..... *
Brook Motor Corp. ..... *
Buffalo Forge Co. ..... *
Buffalo Pumps, Inc. 14
Butterworth & Sons, Co., H. W. ..... *

C

Carrier Corporation ..... *
Carter, Inc., A. B. ..... *
Celanese Corp. of America & Subsidiary Cos. 187
Chandler Mach. Co. 210
Chavis Textile Sales Co. 210
Chemstrand Corporation (Acrilan) ..... *
Ciba Company, Inc. ..... *
Clark-Cutler-McDermott Co. ..... *
Classified Ads 212
Clayton Co., J. M. ..... *
Cleveland Tramrail Division, The Cleveland Crane & Engr. Co. ..... *
Clipper Belt Lacer Co. ..... *
Cocker Mach. & Fdry. Co. 50
Cole Co., R. D. ..... *
Colgate-Palmolive Co. ..... *
Collins Bros. Mach. Co. ..... *
Comer Machinery Co. ..... *
Container Corp. of America ..... *
Continental Gin Company ..... *
Corn Products Refining Co. 134
Cosa Corporation 206
Courtaulds 208
Crompton & Knowles Corporation ..... *
Curlator Corp. (Textile Div.) ..... *
Curtis & Marble Machine Co. 62
Custom Scientific Instruments, Inc. ..... *
Cutler-Hammer, Inc. ..... *

D

Darnell Corp., Ltd. 198
Dary Ring Traveler Co. ..... *
Davis & Furber Mach. Co. ..... *
Dayton Rubber Mfg. Co. 11, 52, 53
Denman Textile Rubber Div. 189
Diamond Crystal Salt Co. ..... *
Diehl Mfg. Co. ..... Second Cover
Dinkler Hotels ..... *
Dodge Mfg. Corp. ..... *
Dommerich & Co., L. F. 66
Dow Chemical Company 144
Draper Corporation 1, 147, 148
Dronsfield Bros., Ltd. 210
Du Pont de Nemours & Co., Inc., E. I. (Dyestuff Div.) 33
Du Pont de Nemours & Co., Inc., E. I. (Electrochemicals Dept.) ..... *

E

Eaton Mfg. Co. ..... *
Economy Baler Co. ..... *
Engineered Plastics, Inc. ..... *
Esso Standard Oil Co. ..... *
Exact Weight Scale Co. 179

F

Fafnir Bearing Co. 32
Fairbanks, Morse & Co. 70
Fairtex Corporation ..... *
Fancourt & Co., W. F. 149
Feedrail Corporation ..... *
Felton & Son Co., S. A. 182
Ferguson Gear Co. ..... *
Fidelity Machine Company 158
Finnell System, Inc. ..... *
Firestone Tire & Rubber Co. 31
Foster Machine Co. 13
Foxboro Company ..... *
Franklin Process Co. 155

G

Garland Mfg. Co. 211
Gaston County Dyeing Machine Co. ..... *
Gastonia Textile Sheet Metal Works ..... *
Gates Rubber Co. ..... *
Gaylord Container Corp. Div. of Crown Zellerbach Corp. ..... *
General Dyestuff Corp. ..... *
General Elec. Co., Nela Park ..... *
General Radio Co. 56
Georgia-Carolina Oil Co. ..... *
Gessner Co., David ..... *
Ginsberg Machine Co. ..... *
Goodrich Chemical Co., B. F. ..... *
Goodyear Tire & Rubber Co., Inc. (Chemical Prod.) 5, 23
Guider Specialty Co. 205
Gulf Oil Corp. 59

H

Harshaw Chemical Co. 51
Hart Products Corp. ..... *
Hartford Machine Screw Co. ..... *
Hayes Industries, Inc. ..... *
Herbert Products, Inc. ..... *
Hercules Powder Co. ..... *
Herr Mfg. Company 142
Hinde & Dauch Paper Co. 26
Howard Bros. Mfg. Co. ..... *
Hubinger Co. 48
Hunter Machine Co. James ..... *
Hyatt Bearing Division ..... *
Hyster Company 16

I

Ideal Industries, Inc. ..... *
Ideal Mach. Shops, Inc. 55
Industrial Rayon Corp. ..... *
International Salt Co. 68
Intertex Corporation ..... *

J

Jacobs Northern Div., E. H. 164
Jenkins' Sons, Inc., M. W. 200
Johnson Corp. 15

K

Keever Starch Company 140
Kidde Mfg. Co., Inc. ..... *

L

Lane & Bros., Inc., W. T. ..... *
Laurel Soap Mfg. Co. 174
Lazenby & Co., F. A. ..... *
Lockwood Greene Engineers 180
Logan Co. ..... *
Loper Co., Ralph E. 208
Louden Machinery Co. ..... *
Ludell Mfg. Co. 171

ADVERTISER'S INDEX

M

Maguire & Co., Inc., John P. 195
Marshall & Williams Corp. ..... *
Marx Co., Clarence J. ..... *
McCandless Corp., The ..... *
McDonough Power Equipment, Inc. ..... *
Meese, Inc. ..... *
Merrow Machine Co. ..... *
Metro-Atlantic Chemical Co., Inc. ..... *
Mirco Switch, a Division of Minneapolis-Honeywell Regulator Co. 146
Miller Corporation, Harry ..... *
Milton Machine Works 204
Minnesota Mining & Mfg. Co. 46
Monsanto Chemical Co. ..... *
Monticello Bobbin Co. ..... *
Moretex Chemical Co. ..... *
Morton Machine Works 44
Morton Salt Co. ..... *
Mount Hope Machy. Co. ..... *
Muller, Messrs. Franz 17

N

National Aniline Division Allied Chemical & Dye Corp. 43
National Business Publications, Inc. ..... *
National Ring Traveler Co. 28
National Starch Prod., Inc. ..... *
National Vulcanized Fibre Co. 156, 177
Naugatuck Chemicals Div. 57
Nemo Industries, Inc. ..... *
New Departure Div. ..... *
New York & New Jersey Lubricant Co. 203
Nitrogen Division, Allied Chemical & Dye Corp. 47
Nopco Chemical Co. 74
North, Inc., Frank G. ..... *

O

Oakite Products, Inc. 172
Olin Mathieson Chem. Corp. 130

P

Pabst Brewing Company 178
Parks-Cramer Co. ..... *
Patterson-Kelly Co., Inc. ..... *
Penick & Ford, Ltd., Co. 54
Perfecting Service Company 202
Perkins & Sons, Inc., B. F. ..... *
Pittsburgh Corning Corp. ..... *
Pneumafil Corporation ..... *
Portland Co. ..... *
Powell Valves 78
Precision Gear & Machine Co. 207
Proctor & Gamble Distributing Co. 72
Proctor & Schwartz, Inc. ..... *

R

RCA Engineering Products Div. 25
Reiner, Inc., Robert ..... *
Reliance Elec. & Engineering Co. 8
Rhoads & Sons, J. E. ..... *
Richards-Wilcox Mfg. Co. 199
Ridge Tool Company 181
Riggs & Lombard, Inc. ..... *
Robbins & Myers, Inc. ..... *
Robert & Co., Associates, Inc. ..... *
Roberts Co. 9
Rohm & Haas Co. ..... *
Rose Company, Bennett 30
Ross Engr. Corp., J. O. ..... *
Roy & Sons Co., B. S. ..... *
Royce Chemical Co. ..... *

S

Saco-Lowell Shops 34, 136
Sandoz Chemical Works ..... *
Sargent's Sons Corp., C. G. ..... *
Scheer Co., Inc., Geo. ..... *
Scholler Bros., Inc. ..... *
Scott & Williams, Inc. 163
Sealol Corp 176
Seydel-Woolley & Co. 29
Shawinigan Resins Corp. ..... *
Sheffield Corp. 176
Simco Company 213
Sims Company ..... *
Sims Metal Works ..... *
Sinclair Refining Co., Inc. 24
Sirrine & Co., J. E. ..... Third Cover
SKF Industries, Inc. 60
Smith, Drum & Co. ..... *
Solvay Process Division, The Allied Chemical & Dye Corp. 19
Sonoco Products Co. 197
Southern Airways Co. 64
Southern Belting & Transmission Co. 168
Southern Shuttles Div. ..... *
Southern States Equip. Corp. 36, 37
Staley Mfg. Co., A. E. ..... *
Standard Brands, Inc. ..... *
Standard Chemical Prod., Inc. ..... *
Standard Oil Co. (Kentucky) ..... *
State of Georgia, Dept. of Commerce 12
Stauffer Chemical Co. ..... *
Steel Heddle Mfg. Co. ..... *
Stowe-Woodward, Inc. ..... *
Swift & Company 45

T

Taylor Co., Halsey W. ..... *
Taylor Instrument Companies ..... *
Tennant Co., G. H. ..... *
Tennessee Corp. 22
Terrell Co. ..... *
Texas Co. 2
Textile Banking Co. 201
Textile Industries ..... *
Textile Machine Works 154
Textile Paper Products, Inc. 6
Textile Shield Co., Inc. 213
Textile Shops ..... Front Cover
Thomaston Mills ..... *
Ton-Tex Corp. ..... *
Tool Service Engineering Co. 162
Torrington Co. ..... *
Treasury Department ..... *
Truscon Laboratories 20
Trust Company of Georgia ..... *

U

U. S. Ring Traveler Co. ..... *
U. S. Textile Mach. Co. ..... *
United States Rubber Co. (Naugatuck Chemicals Div.) 57
Universal Winding Co. 132

V

Veeder Root, Inc. ..... Fourth Cover
Vickers, Inc., Division of Speery Rand Corp. ..... *
Victor Ring Travel Co. ..... *

W

Wallerstein Co., Inc. ..... *
Want Ads 212
Warner & Swasey Co. ..... *
Watson & Desmond 173, 175
West Point Fdy. & Mach. Co. 76, 77
Westinghouse Electric Corp. Apparatus Division ..... *
Lighting Division 58
Whitin Machine Works 49
Whitinsville Spinning Ring Co. 182
Wica Chemicals, Inc. 191
Wildman-Jacquard Co. 150
Wonalancet Company ..... *
Wyandotte Chemicals Corp. 170

Y

Young Aniline Works, Inc. ..... *
Young Machine Co., F. A. ..... *

Z

Zinsser & Co., Inc. 51

MORE THAN THE LUBRICATION LEADER...

ALEMITE®

YOUR ONE DEPENDABLE SOURCE FOR ALL THESE VITAL PRODUCTS:

1. Lubrication Equipment
2. Spray Pump Equipment
3. Hydraulic Hose, Couplings

... with nation-wide service and training programs to back up the products!

Cut Lubrication Costs up to 64%! Alemite offers the widest choice of lubrication fittings on the market – time-saving pumps and guns for handling of lubricants – fully automatic airborne mist lubrications systems – centralized systems for both oil and grease.

Apply Materials 30% Faster! – If you use any material that is received in a drum – paint, putty, caulking, even food products ... Alemite can pump direct from the drum to point of application for spraying, extruding, transfering, packaging!

Protect Hydraulic Systems! – Alemite offers a complete line of non-skive, reusable high pressure hose and couplings for *any* hydraulic system.

And Alemite backs up these products with service points from coast to coast – with free training programs and plant surveys that will save money for *your* company!

For free catalogs and complete information, write Alemite, Dept. Y-87, 1850 Diversey Parkway, Chicago 14, Ill.

STEWART SW WARNER

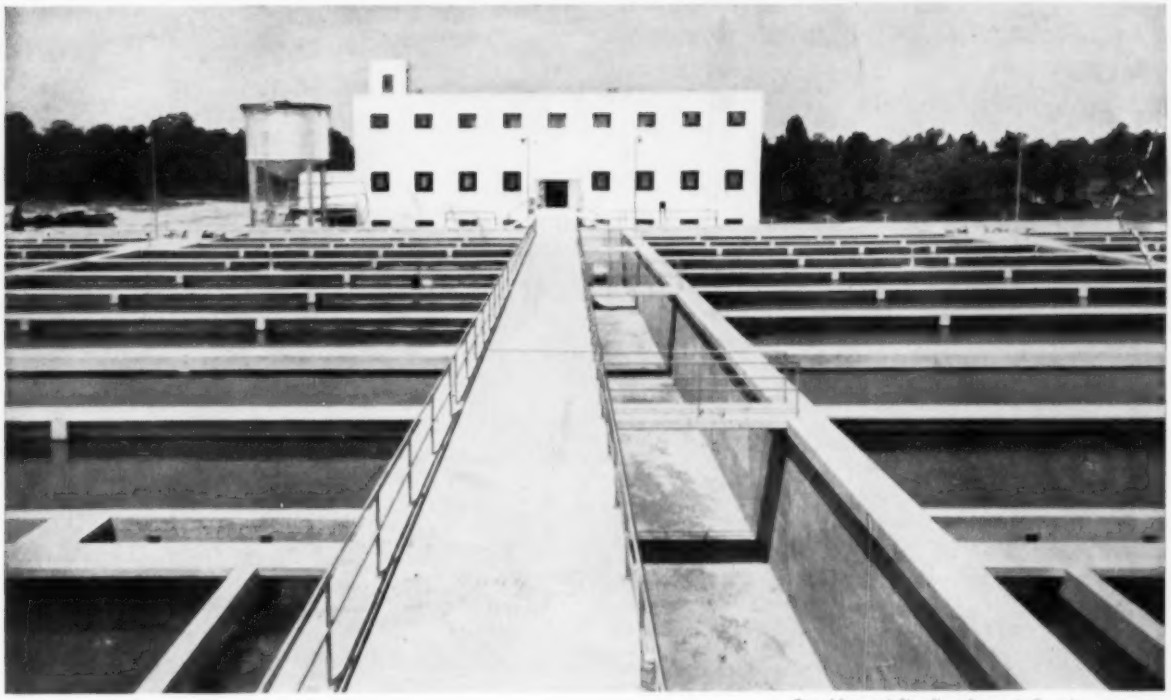
ALEMITE

REG. U. S. PAT. OFF.

Division of STEWART-WARNER CORPORATION

Alemite is the only *single source* for all these famous products:

OIL-MIST	Automatic Airborne Lubrication System
Centralized Lubrication Systems	Accumatic
red ball	Hydraulic Lubrication Fittings
Barrel Pumps for Oil and Grease	"POWERHOUSE"
"BARREL-TO-BEARING"	Manual and Power Operated Pumps and Guns
Spray Pump Equipment	ALEMITE Versatal
SURGEPRUF	Hydraulic Hose and Couplings

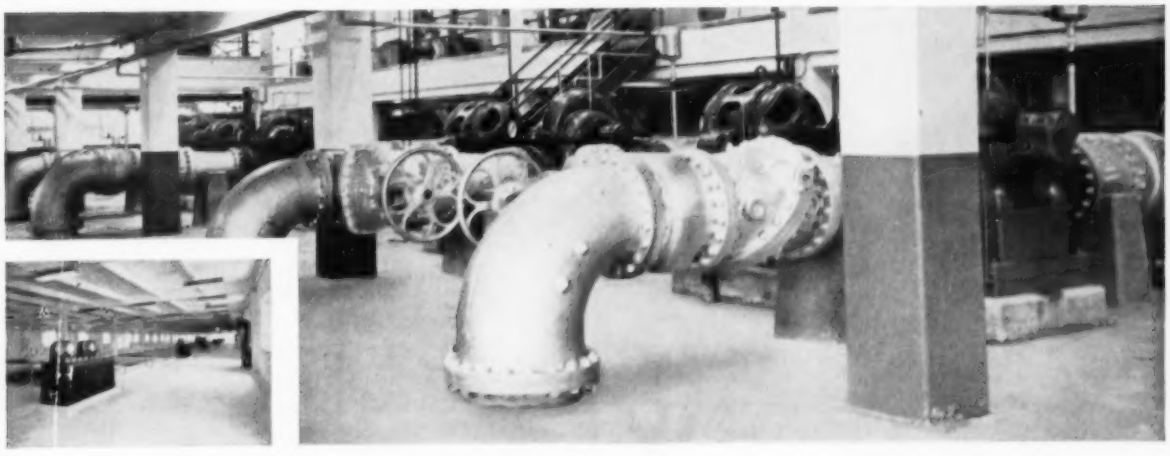


City of Savannah filter Plant, Savannah, Georgia

WATER SUPPLY . .

In meeting the problems of water supply—its source, storage, transit, treatment, distribution and utilization —the knowledge, experience and discernment of the professional engineer can prove especially valuable.

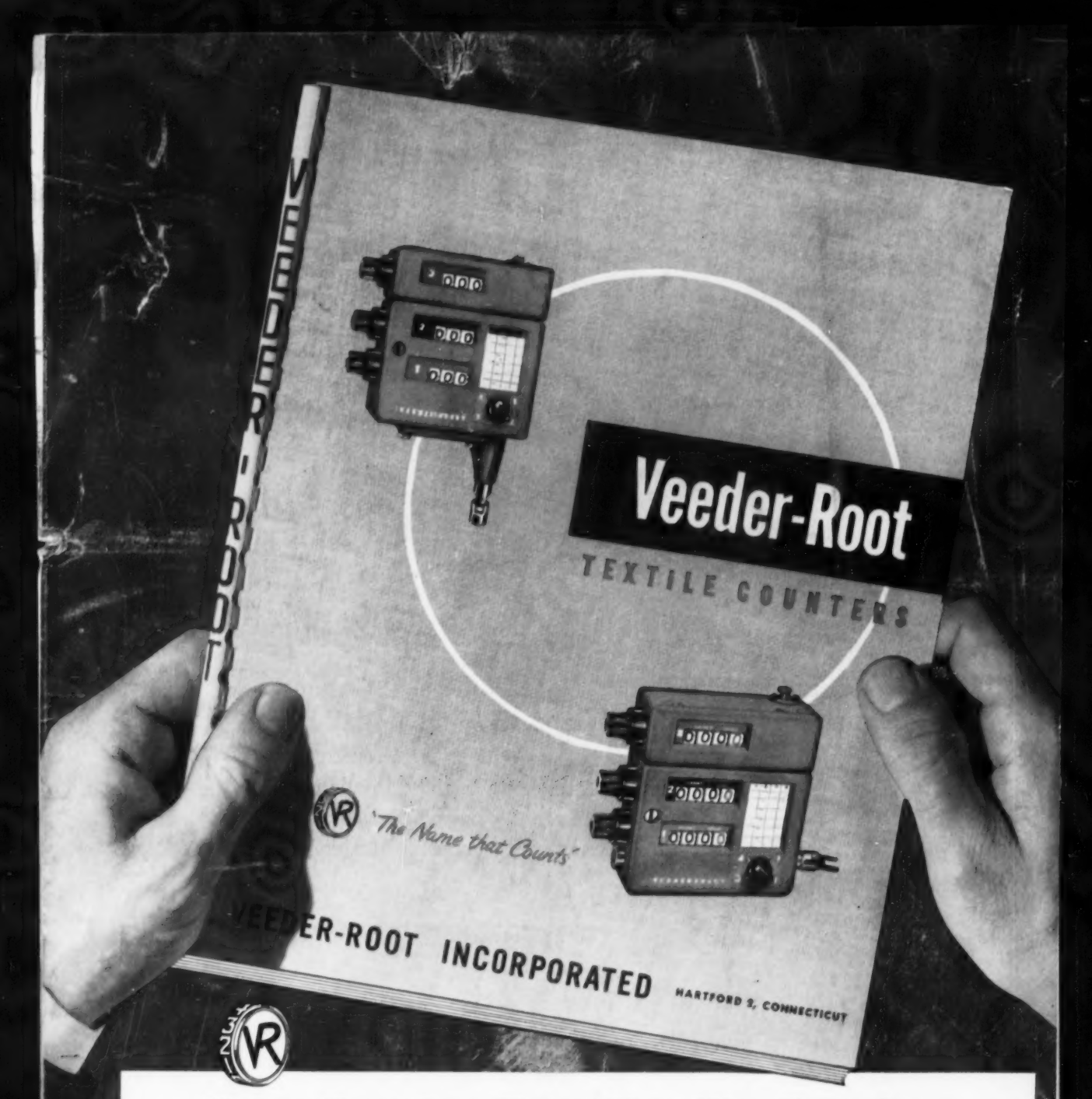
One of a series highlighting the engineer's contribution to industrial progress



Engineers for 55 Years

J. E. SIRRINE COMPANY
GREENVILLE • SOUTH CAROLINA

A DEPARTMENTALIZED ENGINEERING ORGANIZATION SERVING BUSINESS, COMMERCE AND INDUSTRY



New Veeder-Root Textile Catalog

Condensed, concise, complete . . . that's the new 1957 Catalog of Veeder-Root Textile Counters (in full color) just off the press and waiting for you to "ask for it."

Catalog T-57 gives complete specifications and dimensional diagrams on all types of textile counters . . . pick, cut, hank, yardage, inspection . . . and knitting-machine counters, too.

See how to count your way to new methods of Cost-*Count*rol . . . and new profits. Send for this valuable book *today*.

Veeder-Root

INCORPORATED

"The Name that Counts"

HARTFORD, CONN. GREENVILLE, S. C.

Chicago • New York • Los Angeles • San Francisco • Montreal • *Offices and Agents in Principal Cities*